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THE ASSOCIATION OF PARENT FACTORS WITH BULLYING, VICTIMIZATION AND BYSTANDER BEHAVIORS.

by

ESTHER KWEIKI MALM

Under the Direction of Christopher C. Henrich, PhD

ABSTRACT

This study sought to examine two gaps in the field of bullying research – (1) the lack of clear cut theoretical underpinnings and frameworks for examining the process of bullying and (2) over-sight of the parent context in studies on bullying. This two-study dissertation examined the role of parents in understanding bullying, victimization and bystander behaviors using Belsky's parenting process model (1984) as a potential guiding framework. Study 1 relied on secondary analysis with three waves of longitudinal data from the NICHD Study of Early Child Care and Youth Development to test the indirect effect of maternal depressive symptoms on bullying and victimization through mother-child relationship quality. Findings indicated that there was a small direct effect of maternal depressive symptoms at grade 3 on peer victimization at grade 5, but not bullying. Mother–child relationship quality at grade 5 negatively predicted bullying behaviors at grade 6, but not peer victimization. There were also small effects of bullying behaviors at grade 5 on increased maternal depressive symptoms and decreased mother-child relationship

quality at grade 6. There were no significant indirect effects. Study 2, a cross-sectional study of N = 143 fourth and fifth graders and their parents, hypothesized indirect effects of parent's general and specific self-efficacy related to bullying, peer victimization and bystander behaviors through parental monitoring and supervision. Parents' self-efficacy beliefs related to knowledge of their children being victimized, and what to do about the victimization reports was directly and negatively associated with a reduction in bullying and victimization behaviors. Efficacy to know what to do was also negatively associated with negative bystander behaviors but positively associated with victimization in school. There were no significant indirect effects. Findings from both studies suggest that the parent context may play a limited role in processes of bullying during upper-elementary school. Secondly, parent functioning (i.e., maternal depressive symptoms, parental self-efficacy related to bullying) may have direct effects on bullying, victimization and bystander behaviors rather than indirectly through parenting as emphasized by Belsky's model. Other findings, limitations and suggestions for future research and interventions are discussed.

INDEX WORDS: Bullying, Victimization, Bystander behaviors, Parent factors, Belsky's parenting model, Interventions

THE ASSOCIATION OF PARENT FACTORS WITH BULLYING, VICTIMIZATION AND BYSTANDER BEHAVIORS.

by

ESTHER KWEIKI MALM

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

in the College of Arts and Sciences

Georgia State University

2013

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Esther Kweiki Malm
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December 2013

DEDICATION

This manuscript is dedicated to God and to my family who have supported me all through the process.

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS ..... **v**

LIST OF TABLES ..... **x**

CHAPTER 1: INTRODUCTION **1**

1.1 Prevalence of Bullying, Victimization and Bystander Behaviors **2**

1.2 Individual characteristics and Outcomes of Bullies and Victims **5**

Bullies ***5***

Victims. ***6***

Bully-Victims ***6***

1.3 Bystander Behaviors –Prevalence and Individual characteristics **7**

1.4 Theories Related to Bullying, Victimization and Bystander Behaviors **11**

1.5 Current Prevention / Interventions Programs for Bullying, Victimization and Bystander Behaviors. **16**

Bystander Interventions. ***18***

1.6 Review of Program Efficacy and Eeffectiveness. **19**

Efficacy of Bystander Interventions ***21***

1.7 The Family as a Context in Understanding Bullying, Victimization and Bystander Behaviors **23**

1.8 Aims & Objectives of Study: **25**

CHAPTER 2: BELSKY'S PARENTING PROCESS MODEL. **25**

2.1 Belsky's Parenting Process Model **27**

Contextual Sources of Stress and support. ***29***

Parents' Functioning and well-being. *32*

Parenting. *34*

Child Characteristics *36*

2.2 Research Goals and Hypotheses **37**

Study I Variables and Hypotheses. *38*

Study II Variables and Hypotheses *41*

CHAPTER 3: METHODOLOGY AND RESULTS FOR STUDY I **43**

3.1 Study I: **43**

Participants and Procedure *43*

3.2 Measures for Study I **45**

Stress and Support Factors *45*

Parent Functioning *47*

Parenting *48*

Child Variables *49*

Covariates *50*

3.3 Statistical Analytic Plan for Study I **51**

3.4 Results for Study I **53**

Missing Data *53*

Descriptive statistics *54*

Structural Model Results for Study I *59*

Models Including Marital Conflict and Conflict Resolution (N=863) *72*

3.5 Summary of Study 1 Main Findings **82**

CHAPTER 4: METHODOLOGY AND RESULTS FOR STUDY II **83**

***4.1* Study II:** **84**

Participants & Procedure ***84***

4.2 Measures For Study II **88**

Parent Functioning and well-being: ***88***

Parenting: ***89***

Covariates (Parent demographics) ***90***

Child Outcomes: ***90***

4.3 Plan of Statistical Analyses for Study II **92**

4.4 Results for Study II **92**

Factor Analyses of Parent Self-Efficacy ***92***

Descriptive statistics For Study II ***93***

Statistical Analyses for Study II ***96***

Results From The Whole Model ***97***

Covariates ***98***

Models Predicting Each Outcome ***100***

4.5 Summary of Study II Analyses **101**

CHAPTER 5: DISCUSSION **101**

5.1 Overall Summary of Both Studies **101**

Stress and Protective Factors ***102***

Parent Functioning *103*

Parenting *106*

5.2 Limitations of Study and Future Directions **109**

5.3 Study Implications **114**

Appendix A. **138**

APPENDIX B **143**

APPENDIX C **144**

LIST OF TABLES

Table 1. *Demographics of Study 1 Sample* 44

Table 2. Correlations of Study I Variables 55

Table 3. Descriptives of Study I Variables 58

Table 4. Model fit statistics for Study I Model (excluding marital conflict and conflict resolution Variables (N=1081). 62

Table 5. Standardized Estimates of the Final Model Testing Belsky's Parenting Process Model. 65

Table 6. Within time correlation of all Study I variables in model 1D. 70

Table 7. Model fit statistics for Study I Model (including marital conflict and conflict resolution Variables (N=863). 75

Table 8.Standardized Estimates for Model Including Marital Conflict and Conflict Resolution (N= 863). 78

Table 9. Comparison of Study I and Study I Methodologies. 84

Table 10. Study II Survey Demographics (N=143). 86

Table 11. Correlations and Factor Loadings of the Self-Efficacy Measures used in Study (N = 255). 94

Table 12. Descriptive Statistics for Study II Variables. 95

Table 13. Standardized Estimates and Fit Indices of the effects of parent self-efficacies on parental monitoring and bullying, victimization and bystander behaviors (Study II whole model). 99

LIST OF FIGURES

Figure 1.Belsky's 1984 Parenting Process Model. 27

Figure 2. Structural Regression Model (Study 1) Testing Hypothesized Paths guided By Belsky's Parenting Process Model for Bullying and Victimization Behaviors. 40

Figure 3. Hypothesized model for Study II, based on Belsky's (1984) Parenting Model. 42

Figure 4. Model Testing Parent Functioning Variables and Parenting on Victimization & Bullying Behaviors 61

Figure 5. Model testing parent functioning variables and parenting on victimization & Bullying Behavior (N=863) 74

Figure 6. Whole model with only significant paths for SEM between all child outcomes and all parent predictors 97

CHAPTER 1: INTRODUCTION

Overview

National reports on the prevalence of youth bullying and victimization, and research on the adverse health effects of involvement in bullying indicate that bullying is a pressing public health concern (Nishioka, Coe, Burke, Hanita, & Sprague, 2011; Wang, Iannottti, & Nansel, 2009). Bullying is generally defined as physical, verbal or psychological attacks or intimidations that are intended to cause fear, distress or harm to the victim, with a more powerful person oppressing a less powerful one (Farrington, 1993; Olweus, 1993). Bullying is a form of aggression (Farrington, 1993) that is intentional, targeted, most likely to be repeated and there is particularly a power imbalance between the bully and the victim, where the victim can do nothing or attempts to fight back are not sufficient to stop the bully (Graham, 2012).

Generally bullying and victimization can occur physically (e.g. beating, shoving, choking), verbally (insults, sneering, teasing), relationally or psychologically (e.g. shunning ones company, excluding victim from activities) and more recently on the cyber platform (e.g. posting negative comments in cyber chat rooms or Face book). Physical and verbal bullying directly target the victim while relational and cyber bullying are indirect forms of bullying/aggression (Pepler et al., 2006). Some victimized students tend to also bully and are called bully-victims (Haynie et al., 2001; van der Wal, 2004). The act of bullying may also include more than just the bully and the victim. Studies of bullying as a peer group event indicate that there are other participants who act as bystanders (Salmivalli et al., 1996).

Current studies, policies and funding are geared towards preventative measures that aim to reduce and eventually stop bullying and victimization in schools. Most of the-

se intervention and prevention strategies focus on problematic school and individual features. Bystander interventions are also geared towards the use of positive peer influence to curb bullying behaviors. Meta-analytic evaluations of some of these intervention studies in bullying have shown small levels of effectiveness (e.g. Vreeman & Carroll, 2007). There are fewer published evaluation studies for bystander interventions as this is a burgeoning field for interventions.

My dissertation seeks to extend the field of bullying research beyond individual and school factors into exploring what family factors, especially parent factors, might be associated with bullying, victimization and bystander behaviors in children. In this chapter, current literature on prevalence and characteristics of bullies, victims, bully-victims and bystanders are discussed. Theories, interventions and existing gaps in interventions are also discussed. In Chapter 2 the guiding framework for this study are hypothesized and tested. Chapters 3, 4 and 5 focus on the method, analyses of proposed hypotheses and results, and discussion of results respectively.

1.1 Prevalence of Bullying, Victimization and Bystander Behaviors

The prevalence of bullying and victimization behaviors varies by grade, gender and by age. From the 2011 report of the National Center for Education Statistics (NCES), the most recent year data (2009) available revealed that 28% of United States students aged 12–18 years reported being bullied in school during the school year, while 6 percent reported being cyber bullied. National prevalence has been as high as 32% in 2007 according to NCES reports (Dinkes, Kemp, and Baum 2009). The 2011 national school-based Youth Risk Behavior Survey (YRBS) conducted among ninth through twelfth grade students by the CDC, state and local education and health agencies found that 20% of students had reported being bullied on school property during

the 12 months before the survey. Approximately sixteen percent of students also reported being bullied electronically, through avenues including e-mail, chat rooms, instant messaging, websites, or texting, during the 12 months before the survey (Eaton et al., 2012).

The prevalence of having been bullied on school property ranged from 14% to 27% across state surveys and from 10% to 20% across large urban school district surveys. Similarly the prevalence of being electronically bullied ranged from 12% to 22% across state surveys and from 8% to 16% across large urban school district surveys. Studies of large samples across the nation, although not nationally representative have also reported victimization rates ranging between 20% – 60% (e.g. Nansel et al., 2001; Nishioka, Coe, Burke, Hanita & Sprague, 2011).

Bullying behaviors generally peak as students enter middle school and then decline as they reach high school (Berthold & Hoover, 2000; Hazler, 1996; Varjas, Henrich & Myers, 2009). From the 2011 NCES report, the percentage of students who reported being bullied in school decreased from 39% in 6th grade to 22% in 12th grade in 2009 (NCES, 2011). The data also showed a higher percentage of 6th graders having experienced bullying (39%) compared to 7th grade (33%) with consistent decline into 12th grade (22%). Currently, national data on elementary schools have not been reported by NCES.

Bullying types also change from physical overt forms of bullying to indirect relational forms with increasing age. In a study sample of 11, 561, 3rd through 8th grade students from three Northwestern states, relational victimization increased from 3rd grade to 8th grades whereas physical and verbal victimization decreased from 3rd grade to 8th grade (Nishioka, Coe, Burke, Hanita, & Sprague, 2011). This trend was al-

so found in the nationally representative sample studied by Wang and colleagues (2009). When 9th and 10th graders were compared to 6th graders, physical bullying was the least expressed by the three bully groups by the 9th and 10th grade. Victims and bully-victims were also less involved in verbal and relational bullying at 9th and 10th grades compared to bullies. This finding supports other studies that have indicated that bullies progress from physical bullying to non-physical/indirect forms of bullying as they mature, while there is a general decline in physical, verbal and psychological bullying for victims and bully-victims with age (e.g. Craig, 1998; Pepler et al., 2004).

Bullying does not occur only among elementary, middle and high school students alone. Studies have shown bullying and victimization behaviors in pre-kindergarten and kindergarten children as well (e.g. Curtner-Smith et al., 2006; Perren & Alsaker, 2006). Most studies however, focus more on elementary and middle school students probably because bullying and victimization behaviors has become a major public health issue in the country (Feder, 2007). Also, students by elementary school age are capable of understanding and self-reporting incidence and prevalence of these behaviors, compared to children in kindergarten and preschool where reports of bullying and victimization are collected observational studies (e.g. Curtner-Smith et al., 2006).

With respect to gender, more boys are reported to engage in physical bullying, compared to girls who are more involved in relational and verbal bullying (Baldry, 2003; Baldry & Farrington, 2000; Haynie et al., 2001; NCES, 2011; Nishioka, Coe, Burke, Hanita, & Sprague, 2011; Olweus, 1993, 1999; Smith et al., 2008). There are mixed findings about the gender and type of bullying that occurs for bully-victims. Some have found fewer boys than girls to be bully- victims (e.g., Unnever, 2005) while others report higher percentages in boys (e.g. Espelage & Holt, 2007; O'Brennan et. al., 2009;

Veenstra et. al., 2005). Others however, found no significant differences in gender (e.g. Nansel, 2001; Demaray & Malecki, 2003).

1.2 Individual characteristics and Outcomes of Bullies and Victims

***Bullies*.** Bullies behave aggressively, appear to be confident and domineering toward peers, impulsive, lack empathy and are physically stronger than their victims (Olweus, 1994). They are often older than their victims (Olweus, 1993). They are also often popular among their peers and have a network of friends (Unheim & Sund, 2010), from which they derive their energy to bully (Pepler et al., 2006). They have high self-esteem, some times higher than non-victims and non-bullies (Seals & Young, 2003).

Despite behaviors that may indicate positive social functioning, when compared to non-bullies and non-victims, bullies like victims show poorer functioning on academic, social and behavioral measures, as well as have negative short and long-term consequences of their behavior. Academically, bullies are more likely to perform worse than victims and non-bullies (Veenstra, et al., 2005). They are also likely to be unpopular among their peers and teachers but not as unpopular as their victims (Unheim & Sund, 2010) and be disliked just like children who are victimized or uninvolved in bullying (Veenstra et al., 2005). Bullying, in the short term however, may allow children to achieve their immediate goals but without learning socially acceptable ways to negotiate with others, resulting in persistent maladaptive social patterns. In the long term, bullies are at an increased risk of becoming involved in delinquency, crime, and alcohol abuse, other high risk behaviors and personality disorders (Baldry & Farrington, 2000; Copeland et al., 2013; Tofti & Farrington, 2008; Ttofi, Farrington, Lösel, & Loeber, 2011). Thus, in sum, whereas bullies have been reported to have distinctive behaviors, studies suggest that their behavior profiles may not be as clear-cut as generally as-

sumed, especially as some victims become bullies at some point (e.g. Veenstra et al., 2005).

Victims. Victims exhibit poorer social functioning than bullies. They have lower levels of self-esteem and usually are cautious, sensitive, and quiet (Olweus, 1995; Unheim & Sund, 2010). Compared with non-victimized peers, victims are more withdrawn, fearful of new situations, less happy at school and have fewer good friends (Byrne, 1994; Olweus, 1993). They are reported to be more depressed, anxious, feel lonely, insecure and have lower self-esteem than other students (Austin & Joseph, 1996; Turner, Exum, Brame, & Holt, 2013). They score higher on internalizing behavior and psychosomatic symptoms compared to bullies.

Outcomes of being bullied include having a negative perception of school, reduced academic performance, the use of avoidance/escape behaviors such as skipping school, and in extreme cases suicide (Lund et al., 2008; Nansel et al., 2001; Turner, Exum, Brame, & Holt, 2013). Long term consequences of being victimized include the risk of major depression and anxiety in early adulthood (Copeland et al., 2013; Kumpulainen & Rasanen, 2000; Lund et al., 2008; Olweus, 1993c).

***Bully-Victims*.** Bully-victims are known to be more comparable in individual characteristics to bullies than victims as they show elevated levels of dominant and antisocial behavior (Olweus, 1994). They rate high on both neuroticism and psychotism scales than children who are not involved in bullying (Arseneault et al., 2006; Holt & Espelage, 2007). Thus, bully-victims may be more distinct from bullies because their bullying behaviors are more reactive, impulsive and dysregulated compared to the goal-directed and instrumental behaviors generally found in bullies (Haynie et al., 2001). Like bullies however, bully-victims are also disliked by their peers (Veenstra et al., 2005), and

demonstrate higher levels of verbal and physical aggression than do comparison groups (Craig, 1998; Unnever, 2005). In some studies, bully-victims have been more aggressive than bullies (Salmivalli & Nieminen, 2002).

Studies of psychological outcomes suggest that bully-victims suffer more extreme levels of negative consequences as they experience both outcomes of bullies and victims. On psychosocial variables, bully-victims have been found to score higher on measures of externalizing behavior, hyperactivity and on depressive symptoms compared to bullies, victims and the uninvolved groups (Kumpulainen et al., 1998; Unnever, 2005; van der Wal, 2004). They also scored lowest on measures of scholastic competence, social acceptance, behavior conduct, self-control and global self-worth when compared to victims and bullies (Austin & Joseph, 1996; Seal & Young, 2003; Veenstra et al., 2005). A longitudinal study of the effects of being bullied and/ victimized when in middle school suggests that bully-victims are eight, seven and thirteen times more likely to suffer from depression, anxiety and panic disorders respectively between ages 21 and 26, compared to victims (Copeland et al., 2013). Bully-victims also have suicidal symptoms like those found in victims (van der Wal, 2004).

1.3 Bystander Behaviors –Prevalence and Individual characteristics

Recent research into the bully phenomenon reveals that victimization usually occurs in the presence of other peers. Studies of bullying as a peer group event indicate four kinds of participants who exhibit bystander behaviors (Salmivalli et al., 1996). These behaviors may be (1) Assisting behaviors; behaviors in which peers help the bully taunt/attack the victim, (2) reinforcing behaviors; behaviors of peers that act as support or reinforcement to the bully. Examples include jeering or watching out for adults. There also are (3) defending behaviors; behaviors that support and sympathize with the victim

such as speaking up for the victim and telling an adult, and lastly, (4) outsider behaviors; behaviors of peers who neither support the bully nor defend the victim. Example includes watching from a distance or doing nothing to stop the bully event (Espelage, Holt, & Henkel, 2003; Salmivalli et al., 1996; Salmivalli, Huttunen & Lagerspetz, 1997).

Currently, there are more studies on defending (positive behaviors that protect and defend victims) and reinforcing behaviors (negative behaviors that support bullying) (e.g. Veenstra et al., 2005; Salmivalli, Karna & Poskiparta, 2010) compared to other bystander behaviors such as avoidant/passive/outsider behaviors that ignore ongoing bullying, and assisting behaviors in which peers help the bully (Salmivalli et al., 1996). Studies indicate that defending behaviors (e.g. sympathizing, encouraging, seeking help for the victim, stepping into the bullying event) reduce the frequency of future bullying events, whereas reinforcing behaviors (e.g. cheering the bully, alerting the bully of an approaching authority figure, simply being an audience, and not defending the victim) increase the chances of future bullying events happening (e.g. Salmivalli, Karna & Poskiparta, 2010). Since this is a newer research area in the bullying field, particularly in the United States, refinement of definitions, classifications and measures are still ongoing.

More students report defending and outsider behaviors compared to reinforcing and assisting behaviors (e.g.Gini, Pozzoli, Borghi & Franzoni, 2008; O'Connell, Pepler & Craig, 2008; Salmivalli, Huttunen & Lagerspetz., 1996). In a study of 143 middle school students in the United States, 52% self-reported defending behaviors, while 4% reported themselves to exhibit reinforcing. Outsider behaviors were reported by 26% of the students (Nickerson, Mele, & Princiotta, 2008).

Gender differences have also been associated with the type of bystander behaviors exhibited. First, more girls than boys are more likely to report using defending behaviors compared to reinforcing or outsider behaviors (Gini, Albiero, Benelli & Altoe, 2008; Nickerson, Mele, & Princiotta, 2008; Salmivalli, 2010). Secondly, Cappadocia et al., (2012) found that girls who had higher scores on social self-efficacy were over 30 times more likely to report intervening in past bullying events. For boys, high empathy compared to the other characteristics determined defending behaviors (Cappadocia et al., 2012).

Individual differences in bystander behaviors that have been studied so far include studies testing heart rates and emotional reactions (Barhight, Hubbard & Hyde, 2013), empathy (Karna et al., 2011), social self-efficacy (Cappadocia et al., 2012; Karna et al., 2011; Pozzoli, Gini & Vieno, 2012), personal responsibility (Karna et al., 2011), moral cognition (Caravita, Gina & Pozzoli, 2012), perceived parent and peer pressure (Pozzoli & Gini, 2010; Pozzoli, Gini & Vieno, 2012), attitudes towards bullying (Cappadocia et al.,2012; Karna et al., 2011; Pozzoli, Gini & Vieno) and coping strategies (Pozzoli & Gini, 2010; Pozzoli, Gini & Vieno, 2012). In summary, children who had low self-report scores on emotional reactivity to bully events shown in an experiment also had low heat rate scores. They also were less likely to use defending behaviors while those with higher heart rate were more likely to use defending behaviors. Interestingly or rather alerting, 57% of the children in the study by Barhight, Hubbard & Hyde (2013) showed low reactivity to bullying events In another study that compared defenders to outsiders, Cappadocia et al., (2012) found that defenders had a higher sense of empathy, social self-efficacy (perceptions of assertiveness and competence during social sit-

uations) and negative attitudes towards bullying compared to those who did not intervene (also Pozzoli, Gini & Vieno, 2012).

In studies by Pozzoli & Gini, (2010 & 2012) peer pressure to intervene was also more associated with defending behaviors and less to avoidant behaviors. In their 2012 study, children's perception of the expectation of parents to defend victims was found to be positively associated with defending behaviors (Pozzoli & Gini, 2010). Lastly, the type of coping strategy children use determines the type of bystander behavior exhibited. Pozzoli, Gini & Vieno, (2012) found that children who endorsed and utilized "approach" coping strategies (seeking social support, problem solving and internalizing strategies) were more likely to defend the victim where as those who utilized "distancing" coping strategies (distancing self from bullies, victims and the bully event) were less likely to defend victims.

Bystander behaviors also have effects on the mental health of children. Current studies reveal that bystander behaviors can have negative effects on students' psychological and social functioning (Charach, Pepler, & Ziegler, 1995, Rivers, 2012; Rivers, Poteat, Noret & Ashurt, 2009; Salmivalli, 1999). For instance, the fear of negative consequences of standing up for the victim or associating with the bully could have detrimental effects on peer friendships in the short and long term (Rivers, 2012). Bystanders may also harbor feelings of guilt, betrayal or helplessness due to their failure to intervene or because they give in to peer pressure and join in to bully (O'Connell, Pepler, & Craig 1999; Salmivalli, 1999). Bystanders could have later post-traumatic stress, internalized hostility, substance use, and suicide ideation similar to patterns seen in persons who have observed family abuse, community and school violence (Rivers, 2012; Rivers, Poteat, Noret & Ashurt, 2009).

1.4 Theories Related to Bullying, Victimization and Bystander Behaviors

Different theories have been used in attempts to understand and explain bullying, victimization and bystander behaviors in children and adolescents, as well as suggest interventions. Since bullying is a type of aggression (Farrington, 1993), which is a form of antisocial behavior, early theoretical approaches to bullying came from the fields of delinquency, aggression and criminal behavior studies (Farrington, 1993, Baldry & Farrington, 2000). Such theories include Re-integrative Shaming (Braithwaite, 1989); Defiance theory (Sherman, 1993) and Integrated Cognitive Antisocial Potential ([ICAP] theory; Farrington, 1992).

Re-integrative Shaming (Braithwaite, 1989) suggests that offenders who have strong social bonds with their family /or community may be more likely to experience integrative sanctions; sanctions that focus on the behaviors of the offender and not the offender. As such, societies with low crime rates are those that shame antisocial behaviors potently but judiciously (Braithwaite, 1989). Contextually, shaming that focus on bullying behaviors e.g. respectful disapproval and forgiveness by the family/community, instead of on the bully e.g. stigmatization/ostracism, are more likely to reduce rates of bullying than otherwise (Ahmed & Braithwaite, 2005; 2006).

Defiance theory (Sherman, 1993) builds on re-integrative shaming and proposes that aggressive offenders have four features: Offenders (1) identify sanctions as unfair, (2) have poor social bonding, (3) view sanctions as stigmatizing (negative shaming), and (4) deny the shame produced by the sanction. Sherman believes that the primary causal mechanism of repeated aggression (in this case bullying) is the emotion of shame. Thus, the dynamic nature of a bully's emotional response and perception of the fairness of the sanction that was expected to cause shame, in conjunction with the

strength of the social bond in some instances curbs future offending for some, but promotes further deviance for others (Bouffard & Piquero, 2010). Thus, the likelihood of a bully to be defiant and persist in bullying is dependent on the four criteria mentioned.

Lastly, Integrated Cognitive Antisocial Potential (ICAP) theory proposed by Farrington (1992) is a theory that integrates sections of the other theories to understanding antisocial behavior. This theory suggests the interaction between poor long-term ecological factors and everyday habits of the individual. Thus, poor long-term influences (biologic, individual, family, peer, community, etc.) lead to the development of long term, fairly stable violent and risky behaviors in individuals (e.g. in this case bullying behaviors). Simultaneously, short term within-individual characteristics which determine violence potential are ongoing. These characteristics also depend on motivating influences such as being bored, angry, drunk, and on situational occurrences such as the availability of a potential victim for acts of violence to occur (Farrington, 1992). For example, exposure to continuous domestic violence and daily interaction with peers who are involved in gangs predisposes children to bully others more readily and violently over time. Comparing the three theories, ICAP does not emphasize shame and sanctions as key variables but rather the interactions of long term familial and daily individual characteristics. Also ICAP seems to explain the processes that eventually lead aggressive behavior whereas defiance theory and re-integrative theory seem to focus more on ways to handle the behavior that has already been committed.

In recent years, there has been a shift away from the use of criminology theories in explaining bullying behaviors to the use of developmental psychology related theories (Monks et al., 2009). This shift arises as researchers, besides those in the criminal justice field; further seek to understand school bullying and bystander behaviors as behav-

iors not only emanating from the child but also that develop based on external influences on the individual. A number of developmental theories in psychology also explain bidirectional interactions between individuals and the environment. Also developmental theories seem to have the advantage of explaining the underlying processes of the concepts discussed by the criminal justice theories. There may also have been a shift in preference from criminology theories and studies to the realm of normative behavior since bullying, victimization and bystander behaviors occur in children without psychopathology or criminal histories. Developmental psychology theories also provide ways to intervene, and therefore, can guide the design and implementation of possible interventions (Monks et al., 2009). Such theories include the evolutionary theory, social learning theory, social cognitive theory, attachment theory and socio-cultural theories.

Researchers who have used evolutionary theory in relation to bullying suggest that bullying is a mechanism used by students to establish dominance hierarchies in schools (Kolbert & Crothers, 2003). This idea has also been used to explain the group process of bullying which includes bystanders (Salmivalli, Lagerspetz, Bjorkqvist, Sterman & Kaukiainen, 1996; Lagerspertz, 1997). In sum, bullies target victims to establish dominance whereas depending on peer hierarchies within the social context, others decide which bystander roles to play.

Social cognitive theory (Bandura, 1977) explains how bullying behaviors are learned from the overt behaviors of others through observations, imitation (modeling) and reinforcements (Monks et al., 2009). Social cognitive theory emphasizes the influence of cognitive or social skills in explaining aggressive behaviors. Linked to the information processing model (Crick & Dodge, 1994), and the concept of hostile attributional hypothesis, this theory suggests that distorted processing of social information by chil-

dren (e.g. bullies) predisposes them to interpret and react in hostile or aggressive ways in social situations and during problem solving. Social cognitive theory has also been used to discuss behaviors of bystanders (e.g. Salmivalli & Preets, 2008). Children's cognitive processes of situations influence their choice to defend, reinforce, avoid (ignore) or assist in bullying. For example, children are more likely to exhibit defending behaviors if they observe others doing it and have been reinforced for it. Also, the use of defending behaviors is associated with higher level assessments of cognitive, social and emotional situations compared to the level of assessments done by children who exhibit other bystander, bullying and victimization behaviors (Gina, 2006).

Attachment Theory (Bowlby, 1989; Ainsworth, 1979) posits that the child - caregiver relationship bond during infancy and early childhood is important to the development of social competence in adulthood, the disturbance of which is hypothesized to be a key cause of psychopathology (Ainsworth, Belhar, Waters, & Wall, 1978; Bowlby, 1982; Main & Solomon, 1990).Thus, the quality of the infant-caregiver attachment relationship impacts how an individual subsequently relates to others in his/her life (e.g., Troy & Sroufe, 1987; Walden & Beran, 2010). Through the attachment relationships, children develop schemas through which they internalize the ways adults and others respond to their emotional and relational needs. These cognitive frameworks are used in guiding future relationships (Main, Kaplan & Cassidy, 2005). The theory describes two main attachment outcomes - secure attachment and insecure attachments.

Securely attached children are more likely to approach the world and social situations with confidence, deal with conflict effectively or seek help to do so, defend others being victimized (Nickerson, Mele, & Princiotta, 2008) and are less likely to engage in bullying acts. Insecurely attached children, on the other hand, whose emotional needs were in-

consistently met, grow up to see the world as cold and unpredictable. Consequently, insecure children are more likely to respond inconsistently in social situations, either by fleeing away from conflicts and other situations, enduring the effects of the event as often observed in victims of bullying, or by fighting when threatened as seen in bullies (Troy & Sroufe, 1987; Walden & Beran, 2010) and bully-victims. This theory also notes that although individual differences in attachment security can be stable across significant portions of the life span, it remains open to revision in light of new experiences such as changes in parent-child relations (Bowlby, 1989; Waters, et al., 2000).

Lastly, sociocultural theories explain the influence of multi–complex social environments on behavior. The ecological systems theory (Bronfrenbrenner, 1986) is the most well-known theory that explains child development within the context of bidirectional relationships between the child's environment, immediate and more distal contexts. This theory conceptually shows the strategic position parents/ caregivers, who are the closest context for most part of childhood; have in promoting or alleviating bullying behaviors in children. The child (individual characteristics), peer and the school are the main ecologies that have been studied concerning bullying. However studies that have used or reviewed this theory support the idea that bullying and victimization behaviors are reciprocally influenced by individual, family, peer, school, community and the society at large (e.g. Barboza et al., 2009; Garbarino & deLara, 2002; Lee, 2011; Malecki & Demaray, 2003; Swearer & Doll, 2001, Swearer & Espelage, 2004; Swearer et al., 2006).

In summary, these psychological theories expand our understanding of behaviors and provide multiple ways to intervene. One major theme common to both these psychological theories and the criminal justice theories is the important role of the adult

caregiver/family in perpetuating or reducing bullying, victimization and bystander behaviors. Also these psychological theories explain further the underlying processes that can lead to aggressive acts as described by the criminal justice theories and can also be extended to understand bystander behaviors. For instance, the psychological theories including Bronfrenbrenner's socio-cultural theory explain the dynamics described by Farrington's Integrated Cognitive Antisocial potential theory where there are not just interactions between children and the long-term impacts of poor environments, but also the presence of bidirectional effects between the child and other ecologies as well as variations in the strength of the impact of each ecology. For example, the effect of the immediate family on the child is more likely to be stronger at certain ages compared to the effect of the larger community. Evolutionary theory does not focus on bidirectional behavior; however, bidirectionality may be the basis of the development of bully-victim behaviors. In that, when victims rise up the ranks, they also tend to exert power and identity by bullying younger peers in the social hierarchy.

1.5 Current Prevention / Interventions Programs for Bullying, Victimization and Bystander Behaviors.

In the United States, there are a number of interventions that have been implemented to reduce bullying behaviors and encourage defending behaviors. Interestingly, published reports of interventions as well as meta-analytic reviews fail to explicitly indicate the theoretical underpinnings of most interventions. For bullying and victimization interventions, one possible reason for the lack of clear theoretical frameworks maybe the fact that a number of prevention programs are derivatives of other programs, primarily the Olweus prevention program (Tofti & Farrington, 2011). As a result, theory may

not be a major concern for researchers, compared to replicating programs reported as effective in other studies, countries and samples.

The Olweus Bully Prevention Program (OBPP; Olweus, 1994; Olweus et al., 1999) is the most well-known and most researched prevention program both in the United States and in other countries. This prevention program is grounded in aggressive behavior and behavior modification models that emphasize three major goals: first, the creation of warm, responsive environments with adult involvement. Secondly, firm limits by adults should be created for unacceptable behavior. Lastly, firm but non-abusive consequences should be provided and implemented consistently for unacceptable aggressive behaviors (Olweus, 1994). OBPP was originally created and applied in schools in Norway. It was created to be a long-term, school -wide program for change that involves four levels - school, classroom, community and the Individual level. In this program, bullies and victims are identified across grades and linked with adults who get involved in resolving bullying incidents. A number of current bullying programs were developed from this program's framework (Stevens, De Bourdeaudhij & Van Oost, 2001).

The varying types of anti-bullying interventions that have been rolled out in schools across the United States focus on one of three targets groups; (1) the whole school population (e.gs., Olweus Bully Prevention Program [OBPP], Olweus, 1994; Steps to Respect [STR], Committee For Children, 1999), (2) classrooms, curricula or grade levels (e.g. Responding in Peace and Positive ways [RIPP], Farrell, Meyer, & White, 2001), and lastly (3) specific groups/individuals, especially, bullies and victims (e.g. Peer Victimization Intervention (PVI), Varjas et al., 2006; specific sub-sections of the Olweus Bully Prevention Program; Olweus, 1994).

School wide intervention programs seek to promote holistic multi-level efforts among students, teachers, staff and parents through teacher and staff trainings and discussion groups, parent/teacher meetings, increased supervisions on the playground, better playground infrastructure, questionnaire surveys and the formation of coordinating groups (Paramo, 2012; Tofti & Farrington, 2011). Class/grade level interventions are conducted around class activities, or sessions on bullying behaviors, class rules and actions plans against bullying are discussed. Individual level/specific group (e.g. victims or bullies) interventions include talks with bullies and their parents, talks with victims, providing assertiveness training and social support for victims (Tofti & Farrington, 2011). Besides the three main target groups for intervention programs, different programs also have different goals and strategies. Whereas some focus on providing social skills training and ways in responding to conflict (e.g. Responding in Peace and Positive ways [RIPP]; Gentle Warrior Program, a martial arts based program (Nosanchuk, 1981; Nosanchuk & MacNeil, 1989)), others use the zero-tolerance approach to weaken bullying behaviors. Schools with the zero-tolerance approach implement policies that ensure strict sanctions on bullying and victimization behavior among students (Graham, 2012).

Bystander Interventions. The study of individual characteristics has been emerging as part of the goal to understand ways bystanders can intervene during bullying episodes (e.g. Barhight, Hubbard & Hyde, 2013).The major goal for bystander interventions is to promote defending behaviors while reducing assisting and passive/avoidant/outsider behaviors. Consistent with this latest area of research, there are far less published intervention studies. Polanin, Espelage & Pigott (2012) found only eleven studies over the past three decades that specifically focused on measuring bystander intervention variables.

Bystander interventions are usually part of bully intervention programs, thus, similar to bully intervention programs; some bystander interventions target whole schools or classrooms where as other focus on specific social skills for individuals. One program that has published reports of bystander interventions is the Steps to Respect (STR) program (Committee for children, 1999). This program targets all three levels – whole school, classrooms and individuals. Each level uses different strategies to achieve their goal. On the whole school level, administrators and staff develop zero tolerance bullying policies that are implemented across the school. On the class room level, lessons on socio-emotional skills development were taught. Lastly on the individual level, one on one coaching sessions was provided for students identified as bullies. A well know European anti-bullying program (KIVA; Karna et al., 2011) also targets all three levels. This program in particular has its theoretical roots in evolutionary theory.

Other interventions have mostly focused on classroom interventions by focusing on social skills training, empowerment to promote social justice and individual sense of responsibility. Specifically, interventions have focused on increasing empathy toward victims among peers (e.g. Karna et al., 2011; Polanin, Espelage & Pigott, 2012), increasing assertiveness and sense of responsibility (e.g. Menesini, Codecasa, Benelli, & Cowie, 2003), increasing self-efficacy (Karna et al., 2011), the use of talks and media presentations to change students perceptions and beliefs on bullying (e.g. Frey et al., 2009; Merrell, 2004; Shumacher, 2007) and using coping strategies to handle bullying (e.g. Pozzoli, Gini & Vieno, 2012).

1.6 **Review of Program Efficacy and Eeffectiveness.**

Currently, mixed results have been reported for the effectiveness of anti-bullying programs. Generally, effects have been small if any, with a few studies recording nega-

tive effects of the intervention (Ryan & Smith, 2009). For example, a meta-analytic study by Vreeman and Carroll (2007) evaluated anti-bullying programs that targeted whole schools, classrooms (use of curricula) or individuals (social skills training). Their findings indicated that the most effective way of reducing bullying in schools was by involving the whole school –teachers, children and peer groups, where students are taught to change attitudes and behaviors. Their review further indicated classroom -curriculum based programs were the least likely to reduce bullying. However, another meta-analytic review of 45 anti-bullying programs (total sample size = 34,713) implemented between 1996 and 2006 found that school based anti-bullying programs produced weak effects on bullying in schools and may not be as largely effective as expected (Ferguson, Miguel, Kilburn & Sanchez, 2007). This conclusion was made by considering the overall effect sizes reported by all studies across the sample sizes reported. They also found that anti-bullying programs that focused on at- risk students were more likely to produce larger effect sizes than those focused on the whole school (Ferguson, Miguel, Kilburn & Sanchez, 2007).

Different reasons have been given to explain these mixed efficacy and effectiveness results. Firstly, meta-analytic reviews have reported methodological issues to be the main reason for variability in intervention outcomes and efficacy. Examples of method related disparities include the choice of study design, varying sample sizes, duration of intervention and post evaluation (Ryan & Smith, 2009; Tofti & Farrington, 2011) and possibly funding. Secondly, standard systematic evaluation methods are not being applied to anti-bullying program evaluation studies (Ryan & Smith, 2009). This allows for reports and interpretation of intervention results in inconsistent ways.

A third major reason, as mentioned often in the discussion and future directions section of many studies, is the fact that the focus of intervention programs on the individual child and the school system is too narrow. Multiple researchers are repeatedly recommending intervention and prevention programs to be geared towards all levels of the social ecology (e.g. Espelage & Doll, 2001; Espelage & Swearer, 2003; Jeynes, 2008; Wilson & Lipsey, 2007; Veenstra et al., 2005), with particular focus on the family, one of the most important microsystems for children this age (Espelage & Doll, 2001).

The lack of incorporation of the family context in interventions is apparent from reviews of intervention programs that have been implemented over the years. For instance, in a meta-analytic study of effective anti-bullying programs in schools, of the 30 different variations of programs that matched the criteria for the review, only nine included a parent intervention (Ttofti & Farrington, 2009). Further, these parent /family interventions were in the form of presentations for parents and the provision of materials about anti-bullying initiatives in the school during PTA meetings (Ttofti & Farrington, 2009). In short, comprehensive family focused interventions are currently lacking in the goal of alleviating bullying and victimization in schools. A redirection of intervention studies to include the family system should be the next level of focus for researchers, considering the fact that there is substantial knowledge on the role parents and families play in all kinds of child outcomes (Espelage & Doll, 2001). Secondly, the major theme of all the psychological theories discussed earlier is the important role of parents in child development.

Efficacy of Bystander Interventions. There are far fewer studies evaluating bystander intervention. Secondly, similar to the weaknesses of bullying efficacy studies, there are no standards in the field by which results are evaluated (Polanin, et al., 2012).

Despite these drawbacks, a meta-analysis of bystander interventions was conducted by Polanin, et al., 2012). From the eleven studies that qualified for the review, there was an overall small but significant decrease in bystander behaviors at the end of the intervention period. Empathy training as a program outcome was examined as well. Eight of the eleven studies focused on empathy training. Of those eight, three had significant positive changes in bystander behaviors while one had significant negative effects. The remaining 4 had non-significant findings (Polanin, Espelage & Pigott, 2012). From the longitudinal analysis of the STR program, Frey, Hirschtein, Edstrom & Snell (2009) reported a significant decline in destructive bystander behaviors from pre-intervention to months after the intervention. The target behavior was to reduce/change beliefs about bullying and respond assertively and responsibly. Karna et al., (2011) also studied the role of self-efficacy training, empathy and attitudes towards bullying. Their study results indicated higher defending behaviors through increased self-efficacy and anti-bullying attitudes at the first post test (nine months after intervention) when compared to the control group. These effects however reduced and became non-significant by the second post-test.

The role of parents in bystander studies is also lacking. Similar to anti-bullying programs however, very few interventions consider the role of parents. For studies that include bystander interventions, they are often not the primary intervention goal. Similar to bullying behaviors, the extent of parent involvement in bystander related interventions range from psychoeducation, sending copies of bullying policies and materials to parents (e.g. Frey et al., 2005; Karna et al., (2011), to awareness activities (e.g. Salmivalli, Kaukiainen & Voeten, 2005). Considering parent's important role in developing and sustaining healthy behaviors as delineated by parent literature, theoretical frameworks such

as the bio-ecological model and parent-inclusive child interventions programs (e.g. Parent management training Oregon Model; Forgatch, Patterson & Degarmo, 2006), it is important that bullying, victimization and bystander intervention studies consider a more holistic approach to tackling peer victimization in children.

1.7 The Family as a Context in Understanding Bullying, Victimization and Bystander Behaviors

Developmental psychological theories such as those discussed earlier emphasize the role of parents in socializing children. For example, social cognitive theory explains how children learn adaptive and maladaptive behaviors from their environment through modeling. Empirical studies of the family context have consistently shown significant positive and direct relationships between parent/family characteristics and child behaviors in areas including academic achievement, positive social interactions, healthy self-esteem, internalizing and externalizing behaviors but much less with bullying, victimization and bystander behaviors.

Aggression and violence studies, as well as studies on predominantly non-US samples/origin have shown that parent factors both directly and indirectly predict the likelihood of a child exhibiting bullying behaviors. Family environments with high levels of conflict and poor cohesion have been linked to poor parenting (Kerig, Cowan & Cowan, 1993) and bullying behavior both at home and in school (Duncan, 1999). Also bullies tend to model behaviors akin to that of their parents or immediate caregivers (Bandura, 1977) through parenting e.g. parent use of harsh corporal punishment (Gershoff, 2002; Larzelere, 2000). In a study done within a large Italian sample of elementary school students, children's exposure to inter-parental violence was significantly associated with bullying especially for boys (Baldry, 2003).

Besides direct and indirect effects of parent factors on child outcomes, developmental psychological theories also explain the role of bidirectional effects of family context on child outcomes. For instance, Bronfrenbrenner's bio-ecological model explains how the children and their families as well as other contexts simultaneously impact each other (Bronfrenbrenner, 1986, Sameroff & Chandler, 1975). Longitudinal studies have found support for these effects. For instance, studies examining the association of child internalizing behaviors, externalizing behaviors and psychopathology on parental functioning and parenting and vice versa found significant bidirectional effects over time (e.gs.Burt, McGue, Krueger & Iacono, 2005; Gross, Shaw & Moilanen, 2008; Pardini, Fite & Burke, 2008; Keijsers,Loeber, Branje & Meeus, 2011).These studies showed that parenting such as parent-child conflict, parent-child relationship quality, parental supervision, communication, and child outcomes such as antisocial behavior, offending behavior, child depression uniquely predicted each other at later time points. Studies pertaining to parental functioning in particular are fewer although most focus on maternal depression and externalizing behaviors. No studies of longitudinal bidirectional effects of parental functioning or parenting on bullying, victimization and/ bystander behaviors was found.

Since families typically display recurring patterns of adaptive and maladaptive interactive sequences (Goldenberg & Goldenberg, 2008) and parents/primary caregivers are the main modeling agents for their children (Bandura, 1997; Belsky, 1984; Bronfrenbrenner, 1986), it is expedient to evaluate the role parents play in developing and maintaining bullying, victimization and bystander behaviors in their children. Secondly, there is evidence of parents' protective roles in child behaviors in general, how-

ever, specific studies on the relationship between parents factors, bullying, victimizations and bystander behaviors are currently limited.

1.8 Aims & Objectives of Study:

With gaps in the current literature, research and interventions on parents, bullying, victimization and bystander behaviors in particular, the goal of this dissertation is to explore parent factors that may be associated with bullying, victimization and bystander (defending, avoidant and negative [reinforcing & Assisting]) behaviors in children. Secondly, although, there is a growing empirical literature that links parent factors to bullying and victimization, it is largely atheoretical. In addition, various studies have focused on a variety of parent factors and parent practices independently, ignoring the possible mediating and moderating possibilities of other factors. An integration of these parent variables into a theoretical framework of parenting is needed to examine the relative contributions of parent variables on bullying, victimization and bystander behaviors. To achieve this, Belsky's parenting process model (1984) is proposed as the guiding framework. The next chapter introduces Belsky's Parenting model and outlines the hypotheses for studying parents, bullying, victimization and the three bystander behaviors.

CHAPTER 2: BELSKY'S PARENTING PROCESS MODEL.

Developmental psychological theories emphasize the importance of parents/caregivers as well as the child's own active participation with the environment (Bronfenbrenner & Morris, 1998; Lerner & Walls, 1999). Various parent factors have rigorously been studied in relation to child outcomes in general, but much less when bullying, and victimization and most recently, bystander behaviors are concerned. No existing theoretical models have yet been used to examine the role of parent factors in

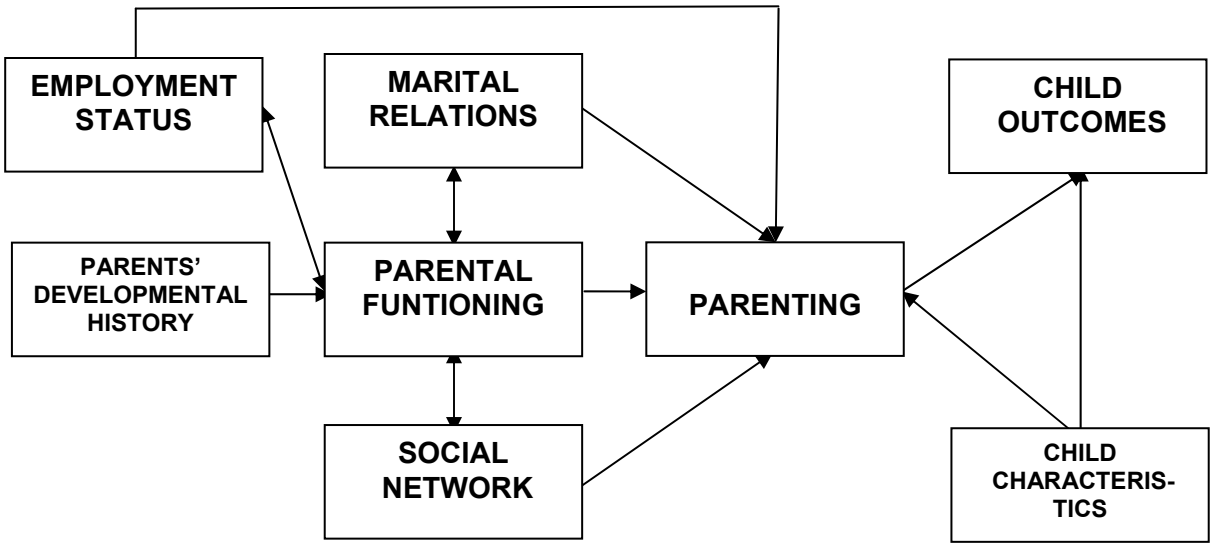
bullying behaviors. To address these gaps, Belsky's parenting process model (1984) was selected to examine these associations. This is a model based on developmental psychological theories, and integrates multiple dimensions of parent factors, direct, indirect and bidirectional effects of these factors on child behaviors.

Belsky (1984) developed his model to synthesize bodies of knowledge necessary to understand and explain the direction of influence from parents to children. He created a model that assessed parent- child relationships, parent functioning and child outcomes simultaneously, rather than studying them as independent and non- related variables as initially studied by various researchers (Belsky, 1984). Referring to Figure 1, the parenting model links key external factors to parent functioning and well-being, which in turn influence parenting and child development. Considering the bi-directional nature of parent-child interactions, the model also maps the bidirectional effects of child characteristics on parenting and child development. This model also allows the exploration of direct and indirect links between parent characteristics; parenting and child development (see Figure 1 below).

Belsky's model has been influential for the past three decades; for example, it has been cited in publications over 3200 times. It has generated a lot of research into the four domains of the model (parent functioning, contextual sources of stress and support, parent practices and child characteristics), providing strong support for the impacts of these domains on child outcomes. Examples of such research areas include studies on child maltreatment, parent-child attachment, parents' early experiences, parent involvement, father involvement (e.g. Belsky, 1993, Belsky, Steinberg, & Draper, 1991; Belsky, Youngblade, Rovine, & Volling, 1991; Crouter, Perry-Jenkins, Huston, & McHale, 1987; Park, Belsky, Putnam, & Crnic, 1997; Whipple & Webster-Stratton,

1991). Secondly, studies on parent factors generated varied views that have established categories of broad parent behaviors (e.g. parenting style versus parenting; Darling & Steinberg, 1993). Thirdly, intervention models for child problem behaviors, such as delinquency and aggression, have been developed with emphasis on the parent context (e.g. Belsky, Gilstrap, & Rovine, 1984; Guralnick, 1997; Mackinnon, et al., 1990; Yoshikawa, 1994). In this dissertation, I seek to investigate whether Belsky's model is a useful heuristic in examining direct and indirect effects of parent factors on bullying, victimization and bystander behaviors. The model is described further in the following paragraphs.

Figure 1.Belsky's 1984 Parenting Process Model.



2.1 Belsky's Parenting Process Model

Belsky's parenting process model (Figure 1) explains parenting as being directly and indirectly influenced by forces emanating from a broader social context (specifically, marital relations, social networks & occupational experiences), the parent (parental

functioning and well-being), parenting, and the child (e.g. temperament). The model shows how the broader social context can affect parent functioning, which then influences parenting which also in turn affects child development.

The directions of effect in this framework support results found in aggression studies (e.g. Baldry, 2003; Baldry & Farrington, 2000; Farrington, 1993) that link parent attributes and poor parenting to both internalizing and externalizing behaviors in children. For example, conflict in the home, particularly marital conflict and domestic violence were found to be predictors of bullying and victimization behaviors in children (Baldry, 2003; Bowes et al., 2009). Similarly, several studies have found positive relationships between parental monitoring and problem behaviors including substance abuse and delinquency (Fletcher, Steinberg & Williams-Wheeler, 2004; Pettit et al., 1999).

Belsky's parenting model also integrates basic principles of a number of psychological theories. For instance, this model defines parents' functioning to be partly due to their developmental history, a fundamental theme of attachment theory (Bowlby, 1982). Parents' childhood experiences and relationship with their caregiver influences their adult functioning which in turn influences the kinds of parenting used when they have children. Bronfrenbrenner's bio-ecological theory (1986) of the interaction of ecological systems can be seen at play in both the parent and child systems. The immediate important social contexts (marital relations, social networks & occupational experiences) significantly influence the functioning of the parents and how they relate to their children. For the child, the parent context (and parenting) influences their immediate socializing environment. The following paragraphs review Belsky's parenting process model. The model is described under the four domains, delineated by Belsky. These are

sources of stress and support, parent functioning, parenting, and **child characteristics.**

Contextual Sources of Stress and support. According to Belsky (1984) and as outlined in figure 1, the three main sources of stress and support that are likely to promote or undermine parental functioning are marital /partner relationships, social networks and employment status.

Marital/Partner Relationships. Belsky argued that marital or intimate relationships serve as the principal support system for parents (Belsky, 1984). Current studies also show that a stable, violence-free home is protective for optimal child functioning when compared to homes with marital conflict and domestic violence (Sousa et al. 2010). Conflict in the home, particularly marital/partner conflict and domestic violence, has been found to predict bullying and victimization behaviors in children (Baldry, 2003; Bowes et al., 2009). In a study implemented in a large Italian sample of elementary school students, Baldry (2003) showed that exposure to inter-parental violence negatively affected more girls than boys and was associated with bullying especially for boys (Baldry, 2003). Girls who were exposed to severe types of parental violence (e.g. mother and father hitting each other, mother harming father and father threatening mother) were three times more likely to be bullies than those not exposed. Also exposure to father's physical violence against mother was significantly associated with victimization while mother violence on father was not. Lastly, mother threatening father significantly predicted relational bullying among both boys and girls (Baldry, 2003). In summary, interparental conflict whether overt or covert can negatively affect child functioning.

Social Network. The social network of parents can be a significant source of both stress and support (Barrera, 1986; Belsky, 1984; McLeod, Baker & Black, 2006; Thoits,

1995). Social support is positively associated with parenting and parent well-being (e.g. Coyne & Downey, 1991; Quittner, Glueckauf, & Jackson, 1990), but can become detrimental when perceived support becomes extreme, and interrupts with the parent's sense of competence, identity and individuality, which results in maladaptive parenting (Belsky, 1984; Sarason et al., 1986; Tak & McCubbin, 2002; Thoits, 1995; Visconti et al., 2002). For example, a study showed that total perceived social support was negatively associated with maternal restrictiveness and punitiveness, use of more rules and more authoritarian punishment techniques (Colletta, 1979).

According to Belsky (1984), social support promotes the sense of parental competence and functions in three ways: by (1) providing instrumental assistance; (2) providing social expectations and (3) providing emotional support (Belsky, 1984). Despite the potential negative effects of social support, support received from significant others besides the spouse (e.g. relatives and friends) are beneficial to the competence of the parent, and the adaptive coping strategies used in the parent-child relationship. Extending the concept to bullying behaviors, the provision of social support (e.g., watching the children while the parent runs errands, or works, cook meals or help clean the house) to parents under stress is likely to positively affect child development indirectly through the ways parents respond to the child. Perceived positive support enhances parents' self –efficacy and self-esteem (Farmer & Lee, 2011), which leads to increased patience, responsiveness and sensitivity expressed during parenting. Consequently, parents are better able to provide the social support their children need for social functioning. To date however, no study has looked at parents' social support and its subsequent impact on bullying, victimization or bystander behaviors in children.

Lastly, Belsky (1984) argued that the **employment status** of parents has a strong impact on parent functioning, which in turn affects parenting. Negative correlations have been found between parent –child relationships and employment status (Bronfrenbrenner & Crouter, 1983; Mayer, 2010). Mothers who are dissatisfied with their employment status have children whose development is less optimal than mothers who are more satisfied with their employment state (Farel, 1980 in Belsky 1984). For example, unemployment increases financial strain which has been found to increase marital conflict (Conger, Reuter & Elder, 1999) and subsequently, the strategies used in relating to the child (i.e., parenting).

Employment status can also be conceptualized to include the length of time parents spend at work, as well as the stress they face at work. There are limited studies to date that review the impact of parents' employment status and work hours specifically on bullying behaviors. In one study of Greek adolescents, Margklara et. al., (2012) found that bullies were significantly more likely to have fathers who were unemployed. Bully-victims on the other hand were significantly more likely to have unemployed mothers. In another study, the impact of paternal and maternal work hours on bullying, and adolescent's perception of parent-child relationship quality was explored at one time point. This study found that longer hours at work by mothers increased the likelihood of bullying behaviors whereas father's work hours did not predict bullying behaviors. When bullying behavior was studied from two time points, parent's long work hours were no longer significant (Christie-Mizell, Keil, Laske & Stewart, 2011). However, adolescents who perceived inadequate time with their fathers had increased likelihoods of exhibiting bullying behavior when fathers worked full-time and overtime hours. The authors acknowledged the limitation of change models which do not capture the effects of varia-

bles which lag longer than the period under study, thereby possibly underestimating the impact of maternal work hours on bullying (Christie-Mizell, Keil, Laske & Stewart, 2011). Thus, there is some support to Belsky's idea that employment status could lead to bullying and victimization.

Parents' Functioning and well-being. Belsky reviewed a variety of data that studied strained relationships of parents on later functioning and mental health of children. He concluded that healthy and supportive developmental experiences of parents gave rise to healthy socio-emotional attributes that positively affected parenting styles and practices. These in turn influenced general functioning of their children (Belsky, 1984). Similarly, poor and unhealthy parent functioning predicted the use of poor parenting and later child development (e.g. Brenan et. al, 2000; Downey & Coyne, 1990). Literature has established strong links between parent's emotional and psychological health (e.g. depression, anxiety, mood disorders, and drug and alcohol abuse) and diverse child outcomes including academic performance, depression, anxiety, drug abuse, delinquency, disruptive behaviors, antisocial behaviors and psychopathology (Connell & Goodman, 2002;Downey & Coyne, 1990; Farrington, 1978; Gelfand & Teti, 1990; Hawkins, Catalano & Miller, 1992; Tully, Iacono & McGue, 2008; Weismann et al., 2006).

One main parental functioning variable Belsky (1984) emphasized as being detrimental to child development was maternal depression. Depression has been found in many studies to impair child functioning through the quality of parenting that is provided (Goodman & Tully, 2008). Depressed mothers compared to non-depressed mothers are more likely to provide a rejecting home environment, be unresponsive, and have low self-efficacy of their abilities to parent, have poor parenting and negative cognitions of

self that children eventually model (Belsky, 1984; Brennan, Le Brocque, & Hammen, 2003; Gelfand & Teti, 1990; Goodman & Tully, 2008). A study of the correlates between maternal depression, bullying and victimization by Georgiou (2008) revealed that maternal depression assessed by Major Depression Inventory (scale from Frederiksborg Hospital; no reference) significantly predicted both victimization and bullying behaviors among students when compared to peers with non-depressive mothers. The link between maternal depression, bullying and victimization behaviors may occur through maternal responsiveness to the child where consistent and low responsiveness reduces parent child interaction and response as social cognitive and attachment theories propose. Another study has shown significant effects of maternal depression on bullying and victimization behaviors in young children as well (e.g. Curtner-Smith, 2000); however, studies are still limited.

Besides the impact of maternal depression on children's behavior, there is evidence that children's behavior also has an impact on maternal depression. A few longitudinal studies have examined and found support for bidirectional effects of child internalizing and externalizing behavior on maternal depression (e.g. Gross, Shaw & Moilanen, 2008). Gross, Shaw and Moilanen (2008) found significant auto regressive relationships between maternal depressive symptoms and antisocial behaviors in boys followed from ages 5 -10. Antisocial behavior and maternal depressive symptoms at age 5 predicted maternal depressive symptoms and antisocial behavior respectively at age 6 which in turn independently predicted each other at ages 8 and 10 also. In other words, while depressive symptoms of mothers had negative effects on the behaviors of boys, possibly through modeling and parenting, these antisocial behaviors exhibited by the boys also negatively affected mothers as well causing a cycle of maladaptive moth-

er-child behavior and responses. The converse is also true when considering adaptive behaviors between parents and children.

Parental self-efficacy is another facet of parental functioning which has also been found to both predict and mediate child outcomes through parenting (Coleman & Karakker, 1997; 2003; Teti & Gelfand, 1991, Jones & Prinz, 2005). Higher perceptions of competence in general and specific aspects of parenting have been found to be positively associated with parenting such as parental monitoring, involvement, and parental warmth (Shumow & Lomx, 2002; Teti & Gelfand, 1991). Parental self- efficacy mediates maternal depressive symptoms where higher perceptions of competence reduced reports of maternal depressive symptoms (Teti, O'Connell & Reiner, 1996) due to parents' perceived incompetence in caring and relating to their children. In other studies, maternal depression, mediated parental self-efficacy suggesting bidirectional effects on each other (Jones & Prinz, 2005) Other factors that have effects on parental self-efficacy include social support and child temperament (e.g. Leahy Waren, McCarthy & Corcoran, 2012). Other studies have found direct effects of parental self-efficacy. There is however, no published study yet on the associations between maternal self-efficacy bullying, victimization and bystander behaviors in children.

Parenting. As indicated in Figure 1, Belsky's model hypothesized a direct relationship between parent functioning and parenting, in that, parental functioning, experiences, and relationships with others influenced how parents related daily (parenting) with their children. Studies show that parental stress, for instance, affects parenting, and depending on the duration and levels of stress, parenting can cause significant dysfunction in children (Anderson, 2009; Belsky, 1984; Conger, Reuter & Elder, 1999; Good-

man & Tully, 2008; Guajardo, Synder, & Peterson, 2008; Pinderhughes, Dodge, Bates, Pettit, & Zelli, 2000).

Studies related to bullying and victimization have documented the negative impact of poor parenting on children. The use of inappropriate physical punishment predicts aggressive behaviors in children (Ohene et al., 2006) and specifically with respect to bullying and victimization (Dussich & Maekoya, 2007; Shetgiri, Lin & Flores, 2013). Other facets of parenting that have shown similar negative relationships include parenting styles, parent monitoring and involvement (Baldry, 2003; Georgiou, 2008; Loeber & Dishion, 1984; Olweus, 1980; Stevens et al., 2002), and parent practices related to child abuse (Baldry, 2003). Maternal depression and other mental health related parent functioning variables via parenting also predict bullying and victimization behaviors in children (Shetgiri, Lin & Flores, 2013).

Studies on parenting styles have shown a link between authoritarian parenting and the use of punitive disciplinary techniques on bullying (Baldry & Farrington, 2000; Loeber & Dishion, 1984; Olweus, 1980). Baldry & Farrington (2000) found that bullies had authoritarian fathers and were more likely than non-bullies to frequently disagree with their parents. Permissive parenting has also been shown to be positively associated bullying behaviors (Curtner-Smith, 2000). Related to parent monitoring, Bowers, Smith, and Binney (1994) found that bullies reported more troubled relationships with parents, and perceived their parents to be low in monitoring and warmth while high in either over-protection or neglect. A study by Georgiou (2008) on middle school students in Greek rural and urban settings found that maternal responsiveness was positively related to child's adjustment at school (i.e. achievement and social adaptation), while the same factor was negatively related to bullying. Overprotective mothering was associat-

ed with high degrees of victimization experienced by the child (also in Stevens et al., 2002).

Child Characteristics. Belsky's (1984) review of child characteristics focused primarily on children's temperaments. Studies and theories show that parent-child relationships are bidirectional (Sameroff & Chandler, 1975; Sameroff & MacKenzie, 2003). The temperament of a child determines how a child responds to his parents, which in turn influence parents' response back to the child. Mothers who perceive their infant as having a difficult temperament are less likely to provide healthy adaptive care and parenting for their children when needed (Bradley & Corwyn, 2008; Kelley, 1976; Stright, Gallagher & Kelley, 2008). Children's temperament, therefore, tends to shape the quantity and quality of parental care (Robinson, Frick & Sheffield, 2005).

Having a difficult temperament has been associated with aggression in childhood and later in adolescence (Rubin et al., 1998; Yoleri & Gursimsek, 2012). Besides this direct relationship, childhood problem behaviors and disorders (e.g. conduct disorders, ADHD) may also mediate the relationship between temperamental attributes and bullying behaviors (Bacchini, Affuso & Trotta, 2009) in that, children with low self-regulation, high frustration tendencies are more likely to be diagnosed of conduct disorders. Low self-regulation and high frustration tendencies are associated with higher scores on the reactive temperamental dimension as well as the individual characteristics of bullies (Haynie et al, 2001; Nansel et al., 2001). Some temperamental attributes of victims include shyness, being reserved and being less likely to take risks while those of bullies include being more outgoing and more likely to take risks (Haynie et al., 2001; Olweus, 1993; 2001).

Temperamental attributes tend to be stable over time. The stability of temperamental attributes has also been found to be a reason why bullying and victimization behaviors may persist for long periods of time, in that, children may find it difficult to change their responses and behaviors in situations that lead to bullying and victimization (Pellegrini & Bartini, 2000).

2.2 Research Goals and Hypotheses

With the current absence of any systematic framework that integrates and explains how parent factors influence bullying, victimization and bystander behaviors, Belsky's parenting process model provides a potentially compelling model to apply to bullying studies. The overall research goal of this dissertation study is to test Belsky's original concepts and directions of effect of the four domains –parent functioning and well-being, stress and support factors, parenting and child characteristics- on bullying, victimization and bystander behaviors in children.

To achieve this, two studies were conducted. The first (Study I) used data from the National Institute of Child and Human development longitudinal study of Early Child Care and Youth Development (NICHD SECCYD; 1991-2004), which includes parent and child variables and measured bullying and victimization behaviors at three time points - grades three, five and six. In this data set, a limited number of parent factors were assessed at these three time points. A second study (Study II) collected data from parents and their children on bullying, victimization and bystander behaviors as well as additional parent functioning and parenting variables. The study variables and hypotheses of both studies are summarized in the next two sections. The methodology and results of studies I and II are found in Chapters three and four respectively.

Study I Variables and Hypotheses. Study I examined longitudinal effects of stress and protective factors, maternal depressive symptoms and parent-child relationship on bullying and victimization behaviors as child outcomes. This study also examined bidirectional effects of bullying and victimization behavior on parent factors, and given Belsky's focus on temperament, a measure of early childhood temperament was included.

Based on the reviewed literature, six hypotheses were tested. The first three hypotheses tested Belsky's structural model. Study I hypotheses are depicted in Figure 2. They were:

(1.1) The five contextual sources of stress and support -marital intimacy, marital conflict and conflict resolution, employment status and social support would have significant negative effects on maternal depressive symptoms (maternal functioning) and parent-child relationship quality (parenting variable) over time.

(1.2) Maternal depressive symptoms would in turn indirectly and negatively predict both bullying and victimization behaviors over time.

(1.3) Examining bidirectional effects, bullying and victimization behaviors would significantly predict parent-child relationship quality over time.

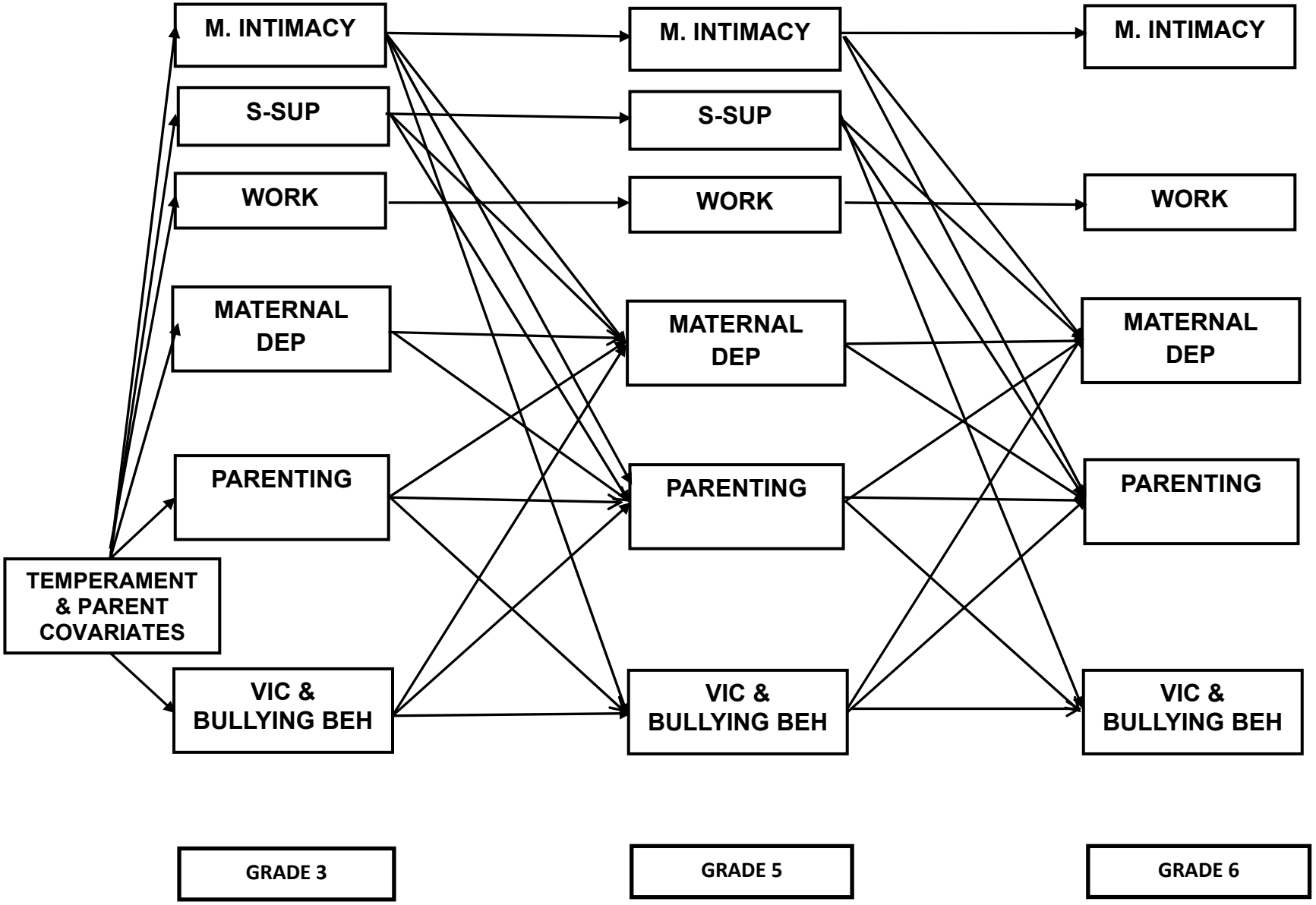
The last three hypotheses were based on previous findings of the associations between bullying and victimization behaviors, parental marital conflict (Baldry, 2003), and maternal depressive symptoms (Georgiou, 2008) in non-US samples. This was also based on findings that indicate child externalizing behaviors directly predicts maternal depression over time (Gross, Shaw & Moilanen, 2008). It was thus hypothesized that beyond Belsky's hypothesized paths:

(1.4) Marital intimacy, marital conflict and conflict resolution, would directly predict bullying and victimization behaviors over time.

(1.5) Maternal depressive symptoms would directly and negatively predict both bullying and victimization behaviors over time.

(1.6) In examining bidirectional effects, bullying and victimization behaviors would significantly predict both parent-child relationship quality and maternal depressive symptom over time.

Figure 2. Structural Regression Model (Study 1) Testing Hypothesized Paths guided By Belsky's Parenting Process Model for Bullying and Victimization Behaviors.



Note. Social support was not measured at grade 6. M. INTIMACY =Marital Intimacy; S-Sup= Social Support; WORK = Employment status; MATERNAL DEP = Maternal Depressive symptoms; VIC = Victimization behaviors; BULLYING BEH = Bullying Behaviors

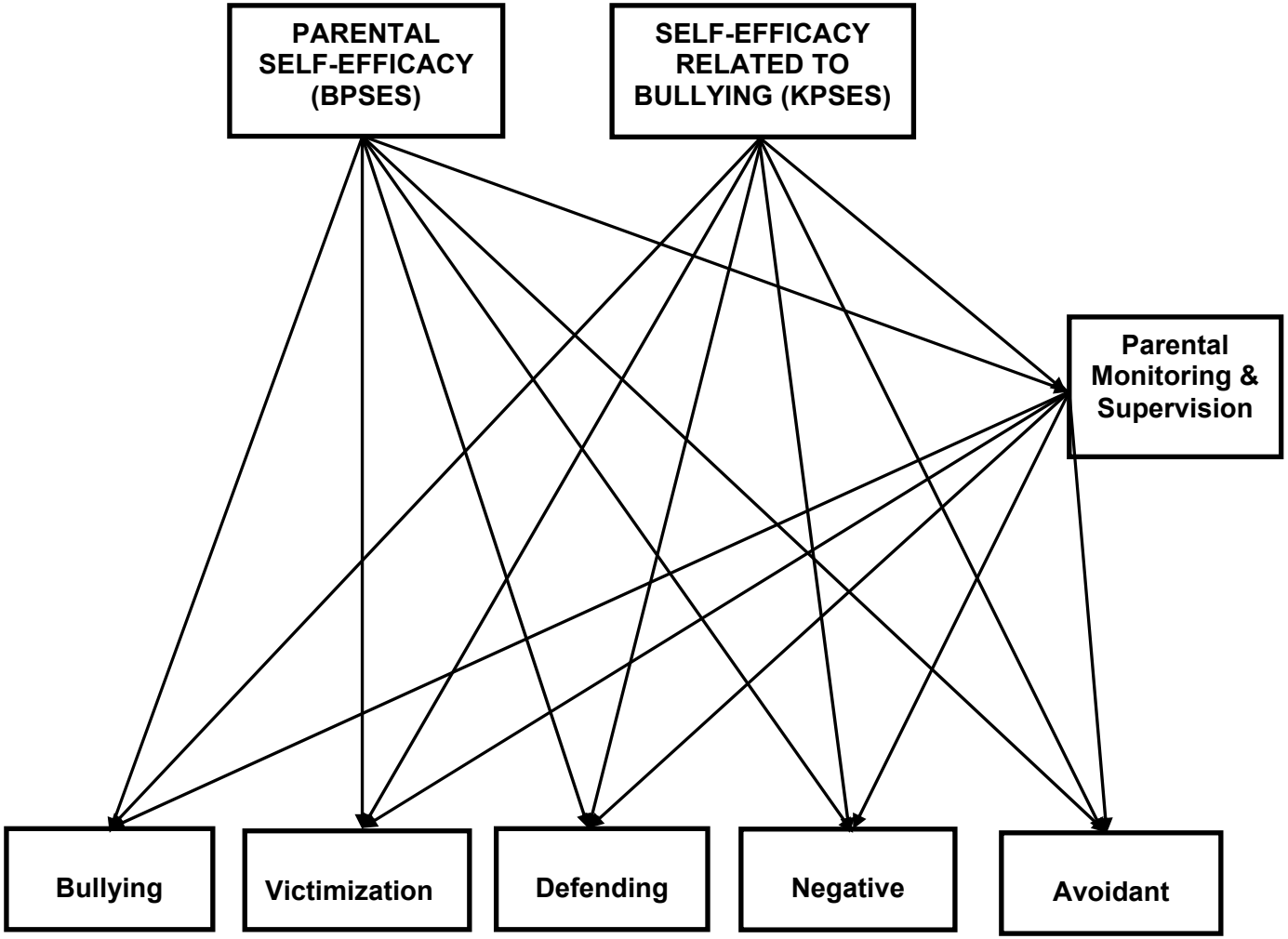
Study II Variables and Hypotheses. Data were collected as part of larger Bully project funded by Center for Disease and Control (Joel Meyers; PI) for a cross-sectional study in which bystander behaviors were studied in addition to bullying and victimization behaviors. Specifically, the child outcomes in study II were bullying, victimization, defending, negative and avoidant bystander behaviors. Secondly, two other parent-functioning variables (parents' self-efficacy to parent and parents' self-efficacy related to bullying and victimization). Parents' self-efficacy was selected as a positive parent functioning variable in contrast to maternal depressive symptoms in study I. Also, a well-established parenting variable, parental supervision and monitoring was examined.

Guided by the key domains of Belsky's model, two 2 hypotheses were tested as depicted in Figure 3.

(2.1) Parental self-efficacy to parent and parental self-efficacy related to bullying and victimization would be directly and negatively associated with bullying, victimization, negative and avoidant bystander behaviors, while being positively associated with defending behaviors.

(2.2) Through indirect pathways, parental self-efficacy to parent and parental self-efficacy related to bullying and victimization would be positively associated with maternal monitoring and supervision which in turn would be negatively associated with bullying, victimization, negative and avoidant bystander behaviors . Monitoring and supervision would however be positively associated with defending behaviors. The methodology and results of studies 1 and II are reported in chapters three and four respectively.

Figure 3. Hypothesized model for Study II, based on Belsky's (1984) Parenting Model.



Note. Bullying = Bullying Behaviors; Victimization = Victimization behaviors; Defending =Defending bystander behaviors; Negative =Negative bystander behaviors; Avoidant=Avoidant bystander behaviors

CHAPTER 3: METHODOLOGY AND RESULTS FOR STUDY I

3.1 Study I:

Participants and Procedure

Data for this study were from the longitudinal National Institutes of Child Health and Development (NICHD) study of Early Child Care and Youth Development (SECCYD). The original sample of SECCYD families was recruited shortly after the birth of the child during the first 11 months of 1991. All mothers who gave birth (N= 8,986) at selected hospitals in 10 sites across the United States, during selected 24-hour intervals were interviewed. Of those families, 3,142 were excluded owing to a priori criteria such as mother under 18 years of age, multiple births, adoption plans, failure to speak English, mothers with a known or acknowledged substance abuse problem, and those living in a dangerous neighborhood and plans to move within the next 3 years. At a follow-up telephone interview at 2 weeks, 1,353 could not be contacted or refused to participate. Families were randomly selected among the remaining pool of eligible participants. A total of 1,364 families were recruited, completed a home interview at 1 month, and became the study participants (NICHD, 2005).

Overall, the final sample constituted a 52% response rate from the original approach to families in the hospital to successful recruitment in the study. In terms of demographic characteristics, 26% of the mothers in the recruited sample had no more than a high school education at recruitment, 21% had incomes no greater than 200% of the poverty level, and 22% were minority (i.e., not non-Hispanic, Euro-American).

The NICHD data were collected in four phases, with Phase III data spanning between grades two to six. The sample size of families who participated at Phase III was 1081, indicating a low attrition for a longitudinal study. Different parent and child con-

structs were measured at different grades of the child during this phase (NICHD ECCRN, 2005). For this study, adolescent and parent data from 3rd, 5th and 6th grade students were selected. Only self-reports of mothers were used in this study. Mothers gave self-reports on marital intimacy, marital conflict, conflict resolution, social support, parenting styles, child supervision and monitoring behaviors, parent-child relationship, work status and other demography while adolescents gave self-reports on their bullying and victimization behaviors from grades 3, 5 and 6. These grades were chosen because they were the only grades at which the outcome variables, bullying and victimization behaviors were assessed in students. Parent and child demographics of the study I sample (N=1081) are summarized in Table 1.

Table 1. *Demographics of Study 1 Sample*

Demographic	Categories	Overall (%)	N 3rd Grade	N 5th Grade	N 6th Grade
Parent Total	Sample Size	1081	1053	1001	986
Maternal Race	White	905 (83.7%)	-	-	-
	African American	128 11.8%)	-	-	-
	Other	48 (4.5%)	-	-	-
Maternal Education	High School/GED or lower	308 (28.5%)	-	-	-
	Vocational/ Bachelors level/ Degree	602 (55.7%)	-	-	-
	Graduate / Post Grad Level	171 (15.8%)	-	-	-
Marital Status	Married/Partnered/ living together	-	834 (77.2%)	815 (75.4%)	810(74.9%)
	Single (never married, divorced, widowed)	-	131 (12.1%)	143 (13.2%)	133(12.3%)
	Other	-	60 (5.6%)	42 (3.9%)	43 (4.0%)
Maternal Employment	Employed	-	788 (72.9%)	784 (72.5%)	773 (71.5%)
Child Total	Sample Size	1081	-	-	-
Gender	Male	542 (50.1%)	-	-	-
	Female	539 (49.9%)	-	-	-

Child Race	White	879 (81.3)	-	-	-
	African American	129 (11.9)	-	-	-
	Other	73 (6.8%)	-	-	-
Reported Bully Behavior		-	997	989	991
Perceived Victimization		-	994	987	990

In terms of the demographics for the study sample (N=1081), 28.5% of the mothers in the study sample had no more than a high school education at recruitment, 16.3% were minority (i.e., Euro-American) and about 70% of mothers were married/partnered at grades 3, 5 and 6. For the children, 50% of them were male, 19% of them were minority (i.e., Euro-American).

3.2 Measures for Study I

Stress and Support Factors

Personal Assessment of Intimate Relations [PAIR]; (Grades 3, 5 & 6). The Personal Assessment of Intimacy in Relationships (PAIR) is originally a 36-item instrument designed to assess the quality and characteristics of marital or partner relationships. All levels of dyadic heterosexual relationships from friendship to marriage could be evaluated through this self-report inventory. The PAIR measures the expected versus the realized degree in five areas of intimacy: emotional intimacy, social intimacy, sexual intimacy, intellectual intimacy, and recreational intimacy. For the NICHD study, only the emotional intimacy subscale (Love and Relationship scale) was used, which comprises of six items.

The spilt-half method of analysis was used to tests its internal consistency. The emotional intimacy subscale was internally consistent ($\alpha = 0.70$) (NICHD ECCRN, 2005; Moore et al., 1998). Scores ranged from 1(strongly disagree) to 5 (strongly agree) on a Likert scale. Scores were calculated as the mean of the responses to the six items, with higher scores indicating better mother partner relations.

Partnership Conflict & Resolution; (Grades 5 & 6). This scale was created by the NICHD team from three sources. The 22 item scale is made up of 5 items from the parental/partner conflict subscale of the Braiker-Kelly measure (Braiker & Kelly, 1979). Thirteen (13) items are from the Kerig resolution scale which measures the degree to which interparental / partner quarrels are successfully resolved (Kerig, 1996). The last four items asked about frequency of disagreements and satisfaction with the relationship.

Reliability scores range between 0.81 - .88. The scale is reported to be valid (NICHD ECCRN, 2005). Scores are calculated for two sub areas. The *Conflict Score* is imputed by proportional weighting as the mean of responses to items 1 to 5. The *Conflict Resolution Scale* is also computed as the sum of responses to the remaining 15 items with proportional weights on scores.

Social Support (Grades 3 & 5): This questionnaire was designed by the NICHD study team to measure the perceived support or assistance others provided over the past month. The self-administered questionnaire had 11 questions based on Weiss's (1974) conceptualization of the functions of social relationships (i.e., sharing concerns, intimacy, and opportunities for nurturance, reassurance of worth, and assistance/guidance).

The measure had a high level of internal consistency (Cronbach's alpha = .91) with a test-retest internal consistency score of .68 over 4 months (NICHD ECCRN, 2005). The measure was also valid, with significant correlations with depression ($r = -.38$, $p < .001$), anxiety ($r = -.23$, $p < .001$), and physical health as measured by physical symptoms ($r = -.20$, $p < .001$) (NICHD ECCRN, 2005).

Responses were on a 6- point Likert scale ranging from 1 (None of the time) to 6 (All of the time). The *total Social Support score* was rated as the mean of responses to the 11 items which was computed using proportional weighting. Higher scores indicated higher perceptions of social support during the last month. The mean score in the study was 5.11 and 5.11 for grades 3 and 5.

***Employment Status (Grades 3, 5, 6)*:** This interview was also developed for the NICHD study to collect specific information from all mothers using a systematic form and objective technique. Demographic information was collected at every grade. To measure the effect of employment on bullying and victimization behaviors in this study, data on employment status was used. Employment status was coded as 0 (unemployed) and 1 (employed, on vacation, on leave). From Table 1, more mothers were employed than unemployed at every time point (*M* =.76).

Parent Functioning

The Center for Epidemiologic Studies, Depression Scale [CES-D]; Radloff, 1977; Grades 3, 5, 6). Mothers' functioning and well-being in Belsky's model (Figure 1 & 2) was measured by mothers' scores on depressive symptoms measured by the CES-D at grades 3, 5 and 6 of their children. The CES-D includes 20 items that assess depressive symptoms during the week prior to the evaluation.

The CES-D has high internal consistencies among adults of different populations and ethnicity (Conerly, Baker, Dye, Douglas & Zabora, 2002; Roberts, 1980). From the NICHD study, Cronbach alphas for CED-D (mothers) were .91, .90 and .91 at grades 3, 5 and 6 respectively (NICHD ECCRN, 2005).

Item responses ranged from 1 (less than once a week) to 4 (5-7 days a week). Responses were later recoded to match the original scale score range of 0-3 for interpreta-

tion. Total scores range from 1-60 with higher total scores signifying more depressive symptoms (NICHD ECCRN, 2005). The clinical cut off for the 20item scale is 11, indicating “mild” or “significant” symptomatology. In the current study, the mean CES-D score across the three grades were 9.08, 8.73 and 8.96 respectively. The median score was 6.00 across the three grades.

Parenting

Child - Parent Relationship Scale [Short form; CPRS]; (Grades 3, 5, 6). This 15-item parent questionnaire was originally adapted from the Student Teacher Relationship Scale (STRS; Pianta, 1992), and measured parents’ attachment to the study child at different ages. Items probed parents’ feelings and beliefs about their relationship with the study child and about the child’s behavior toward the parent. The NICHD study evaluated three sub-areas: Conflict with child, closeness with child and total positive relationship with child. This study used the total positive relationship score which was the sum of scores on both scales.

The NICHD study reported internal consistency and validity rates by grades. For grades 3, 5 and 6, the reliability coefficients for *total positive relationships with child* ranged from .81 to .84 respectively (NICHD ECCRN, 2005). The measure had moderate correlations with behavioral ratings including Social Skills Rating System and Child Behavior Checklist (Driscoll & Pianta, 2011; NICHD ECCRN, 2005).

Parents rated items on a 5-point Likert scale from 1 (Definitely does not apply) to 5 (definitely applies). Scores were computed as the sum of items 1 – 15 with items 2, 4, 8, 10, 11, 12, 13, and 14 being reverse coded. The possible range of scores was 15 - 75, with higher scores indicating more positive total relationships between the mother

and child (NICHD ECCRN, 2005). The mean scores for this study across the three grades were 63.06, 62.19 and 61.41 respectively.

Child Variables

Bullying & Victimization Scale; (Grades 3, 5, 6): This measure (entitled in the NICHD data as Peer Social Support, Bullying, & Victimization) was a compilation of 18 items taken from three questionnaires developed by Gary Ladd and his colleagues (1996; 1997). The scale measured engagement in physical and verbal bullying behaviors with school classmates, and perceived victimization at grades 3, 5 and 6. Moderate internal consistency was reported for victimization (4 items, Cronbach's alpha = .81) and bullying behaviors (4 items, Cronbach's alpha = .78).

These items assessed physical, verbal and relational bullying and victimization. The bullying behavior items were: Do you (a) pick on other kids in your class at school, (b) say mean things to other kids in your class, (c) say bad things about other kids in your class at school, and (d) hit other kids in your class at school? Similarly, questions assessing victimization were: Does anyone in your class (a) pick on you at school, (b) say mean things to you at school, (c) say bad things about you to other kids at school, and (d) hit you at school?

Responses were rated on a 5 point Likert scale, from 1 (Never) to 5 (Always). Scoring for perceived victimization was computed as the average of the responses to the four victimization items, while Engagement in bullying behaviors score was computed as the average of the responses to the four bully items. Higher scores on the bullying and victimization scales indicated higher reports of engagement in bullying, and higher rates of perceived victimization respectively. Across the three grades, mean perceived

victimization scores ranged between 1.76 and 1.84 while bully scores ranged between 1.21 and 1.37.

Temperament (CBQ; Rothbart, Ahadi, et al., 1994; 54 Months): Children's temperament was measured when children were 54 months old using the Children's Behavior Questionnaire (CBQ; Rothbart, Ahadi, et al., 1994; Rothbart, Derryberry, et al., 1994). The CBQ, a parent-report measure for children from 3 to 8 years of age, asked parents to rate their children's behaviors, during the past 6 months. The NICHD SECCYD used an abbreviated version of the CBQ containing 8 subscales.

Studies examining temperament and bullying behaviors acknowledge anger and fear as two temperamental traits associated with bullying and victimization respectively (e.g. Yoleri, & Gürşimşek, 2012), therefore anger and fear were considered. However, only the anger trait was included in the study because the fear variable was not significantly correlated with bullying or victimization behaviors at the three grades.

The CBQ is a widely-used, theoretically derived, rating scale of temperament, and has well-established external validity and internal consistencies (Garstein & Fargot, 2003; Rothbart et al., 1994, 2001). The Cronbach's alpha for this subscale which was between the current sample was .60-.85(NICHD ECCRN, 2005).

Each trait was measure by a 10-item subscale using a 7-point Likert-style scale (1 = extremely untrue and 7 = extremely true of your child). Scores are computed as the mean of items for each dimension with higher scores indicative of a higher level of anger or being easily angered when interrupted from ongoing tasks or goal blocking.

Covariates

Three parent variables were included as covariates in all the models. The parent covariates were (1) maternal ethnicity, with Caucasian and others as the comparison

group to African American. (2) Maternal marital status at grade 3, which was dummy coded into two variables – married and single, and lastly (3) maternal income at grade three. Maternal income and marital status was selected at grade 3 because these variables had high correlations at grades 5 and 6.

3.3 Statistical Analytic Plan for Study I

A cross-lagged structural equation model was used to test Study I hypotheses. Cross lagged models examine predictive associations between variables over time, while controlling for effects at earlier time points. They also give information about changes in effect of variables over time (Cole & Maxwell, 2003; Selig & Preacher, 2009). In this study, variables at grades 5 and 6 were predicted controlling for effects from grades 3 and 5 respectively. For example, the effects of maternal depressive symptoms at grade 3 on bullying and victimization behaviors at grade 6 would predict from parenting at grade 5 controlling for all variables at previous time points (See Figure 2).

All analyses were done using the Mplus software (v7 Muthen & Muthen, 2010). All models were tested with bullying and victimization behaviors estimated simultaneously. All covariates (maternal ethnicity, income and marital status at grade 3, and child temperament at 54 months) were also included in all the models. All the predictors in grade 3 were regressed on these covariates.

All analyses were run using results averaged from 30 random multiple imputation datasets that was generated in Mplus. The multiple imputation technique is a method which uses Bayesian analyses to estimate missing data where missing values on more than one variable are simultaneously generated from other predictors (Asparouhov &

Muthen, 2010). Maximum likelihood with robust estimation (MLR) was used in the analyses. MLR is robust to violations of non-normality.

The hypothesized structural paths were estimated across the three time points. In addition, all possible non-hypothesized cross lagged paths were also estimated in order to understand the directions of effect for paths not indicated in Belsky's model. Therefore non-hypothesized paths between stress and protective factors and among parent functioning, parenting and child outs were also estimated across time. Within each wave, correlations of all variables were estimated. For clarity of figures in the results section, within wave correlations were not shown in the final model, however all correlations in the model were reported for the final models in Table 5.

A number of fit indices are often used in assessing structural equation models. Model fit is assessed by evaluating a number these fit indices concurrently (Kline, 2011). The four fit indices mostly reported in social science literature are reported. They are the Root Mean Square Error of Approximation (RMSEA) compares the estimated model to the population covariance matrix (Kline, 2011). RMSEA values range from 0.00-1.00. Values ≤0.05 suggest a good fitting model. Comparative fit Index (CFI) compares estimated model to the baseline model. CFI values range from 0-1.0 where 1.0 indicates best fit (Kline, 2011). Lastly, Standardized Root Mean Square Residual (SRMR) indicates the overall difference between the observed and predicted correlations (Kline, 2011). Values ≤ .08 suggest good fit with 0 indicating best fit.

In addition, the Akaike Information Index (AIC) is a predictive fit index used to estimate the best model among non-nested models. The model with the smallest AIC is the model best fitting the data (Kline, 2011). In this study, nested models were examined however, chi-square difference tests that examines nested models could not

be used data as Mplus does not provide data for chi-square difference testing with multiple imputation datasets. The final data in multiple imputation datasets are averages of all the datasets given in the command. AIC however serves the same purpose and was reported in this study. The acceptance of the final models was guided by fit indices and also by theory.

3.4 Results for Study I

Missing Data

According to reports from the National Institutes of Child Health and Development (NICHD) study of Early Child Care and Youth Development (SECCYD, 1081 families were followed between grades 3 and 6. The whole sample was used for data analyses. All variables were measured at grades 3, 5 and 6, except social support (measured at grades 3 and 5 only), marital conflict (measured at grades 5 and 6 only) and conflict resolution (measured at grades 5 and 6 only). All variables had different rates of missing data, variables with the largest missing data were marital intimacy with 26% missing data, and both marital conflict and conflict resolution with 30% missing data. All other predictors in the hypothesized model had less than 8% missing data.

Marital conflict and conflict resolution variables were suspected to be systemically missing (non- ignorable). In the NICHD questionnaire, parents who did not live with a spouse or partner were asked to skip items on conflict; therefore it was assumed that single mothers without partners were most likely not to respond to questions on partner conflict and conflict resolution. As a result, values from multiple imputation of these variables were expected to be inaccurate. To address the issue, two samples were created for study I, one using the overall sample size (N=1081), but excluding marital conflict

and conflict resolution in the model and the other including marital conflict and conflict resolution (N=863). All other variables in both models were the same.

Descriptive statistics

Table 2 shows correlations of all the variables used in both models. The difference between the two major models in study I is the presence or absence of marital conflict and conflict resolution in the model. Information on descriptives is also reported in Table 3. All the variables were screened to examine their distribution. Some variables slightly violated the normality assumption however, the use of MLR as the estimator adjusts for violations of normal distribution assumptions (Kline, 2011).

From Table 2, significant correlations between the maternal depressive symptoms and parenting across the three grades ranged between -0.24 and -0.30. Secondly, significant correlations between the maternal depressive symptoms and the outcome variables (bullying and victimization) at the three grades ranged from 0.07 to .17. Lastly, significant correlations between the covariates and outcome variables ranged between -.01and 0.18 for the three grades. Bully variables at the three time points were significantly correlated and ranged between .28 and .52. Similarly, victimization behaviors ranged between .03 and .55. The correlations between bully and victimization behaviors were also significant and ranged between .17 and .40 across the three time points. The strongest significant correlations were negative correlations between maternal depressive symptoms and marital intimacy. With respect to outcome variables, the strongest relationships were negative relationships between victimization and parenting.

Table 2. Correlations of Study I Variables

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	MADEP_G3	1														
2	MADEP_G5	.58**	1													
3	MADEP_G6	.46**	.55**	1												
4	TPRE_G3	-.29**	-.27**	-.26**	1											
5	TPRE_G5	-.29**	-.30**	-.24**	.68**	1										
6	TPRE_G6	-.29**	-.27**	-.28**	-.66**	.71**	1									
7	VICTIM_G3	.09	.08*	.08*	-.14**	-.10**	-.13**	1								
8	VICTIM_G5	.16**	.17**	.11**	-.12**	-.12**	-.12**	.42**	1							
9	VICTIM_G6	.14**	.14**	.15**	-.09**	-.11**	-.13**	.34**	.55**	1						
10	BULLY_G3	.05	.02	.05	-.10**	-.11**	-.12**	.40**	.19**	.17**	1					
11	BULLY_G5	-.01	.06	.07**	-.08**	-.13**	-.15**	.24**	.41**`	.21**	.36**	1				
12	BULLY_G6	.06	.03	.09**	-.06	-.14**	-.16**	.19**	.24**	.31**	.28**	.52**	1			
13	INTIMACY_G3	-.41**	-.30**	-.21**	.22**	.28**	.25**	-.06	-.10**	-.09*	-.02	-.03	-.04	1		
14	INTIMACY_G5	-.35**	-.43**	-.31**	.22**	.28**	.25**	-.06	-.10**	-.11**	-.03	-.02	-.04	.64**	1	
15	INTIMACY_G6	-.27**	-.29**	-.43**	.20**	.23**	.25**	-.05	-.06	-.11**	-.02	.03	-.06	.60**	.66**	1
16	MAEMP_G3	.02	-.04	-.02	.03	.05	.05	.01	.04	.03	-.01	.03	.00	-.04	-.01*	-.02
17	MAEMP_G5	.02	-.03	-.05	.04	.04	.07*	.04	.03	-.04	-.01	.17	-.01	-.03	-.01	.01
18	MAEMP_G6	-.03	-.08*	-.11**	.04	.03	.42	.00	.02	-.05	-.03	.04	.00	-.05	-.01	-.00
19	SOSUP_G3	-.41**	-.32**	-.24**	.30**	.31**	.27**	-.04	-.09**	-.09**	-.07**	-.03	-.02	.50**	.41**	.36**
20	SOSUP_G5	-.39**	-.50**	-.32**	.30**	.36**	.26**	-.07*	-.08**	-.09**	-.05	-.01	-.01	.42**	.58**	.42**

Table 2 contd**.** *Correlations Between Covariates and Study I Variables.*

		16	17	18	19	20	21	22	23	24	25	26	27	28
1	MADEP_G3						.26**	.23**	-.22**	-.20**	-.22**	-.19**	.12**	.20**
2	MADEP_G5						.28**	.23**	-.28**	-.23**	-.22**	-.17**	.10**	.20**
3	MADEP_G6						.28**	.38**	-.24**	-.34**	-.21**	-.15**	.09**	.18**
4	TPRE_G3						-.18**	-.15**	.22**	.19**	.10**	.08*	.02	-.37**
5	TPRE_G5						-.20**	-.15**	.24**	.22**	.12**	.09**	-.02	-.30**
6	TPRE_G6						-.18**	-.17**	.21**	.21**	.12**	.13**	-.01	-.33**
7	VICTIM_G3						.09*	.05	-.07	-.03	-.11**	-.08*	.11**	.11**
8	VICTIM_G5						.05	.04	-.05	-.03	-.12**	-.09**	.09**	.09**
9	VICTIM_G6						.06	.04	-.07	-.05	-.06	-.07*	-.01	.10**
10	BULLY_G3						.04	.03	-.01	-.02	-.06	-.08*	.10**	.08*
11	BULLY_G5						-.02	-.02	-.01	.05	-.06	-.14**	.18**	.08*
12	BULLY_G6						.01	.05	-.01	.01	-.06	-.13**	.12**	.10*
13	INTIMACY_G3						-.45**	-.42**	.55**	.50**	.13**	.02	-.03	-.13*
14	INTIMACY_G5						-.53**	-.45**	.50**	.54**	.10**`	-.05	-.03	-.13*
15	INTIMACY_G6						-.40**	-.62**	.58**	.71**	.09*	-.09*	.06	-.12*
16	MAEMP_G3	1					.03	.03	-.00	.02	-.01	-.07*	.06	.03
17	MAEMP_G5	.55 **	1				.05	.04	-.01	.04	-.04	-.08*	.05	.02
18	MAEMP_G6	.52 **	.72 **	1			.05	.06	-.01	.01	-.00	-.01	.03	.01
19	SOSUP_G3	-.00	-.01	-.00	1		-.24**	-.23**	.31**	.31**	.09**	.04	-.07*	-.11**
20	SOSUP_G5	-.04	.01	.01	.58 **	1	-.30**	-.22**	.41**	.34**	.11**	.09**	-.08*	-.11**

Table 2 contd. *Correlations Between Covariates and Study I Variables.*

		16	17	18	19	20	21	22	23	24	25	26	27	28
21	M.CONFL_G5						1	.67**	-.66**	-.51**	.01	.07*	-.01	.18**
22	M.CONFL_G6							1	-.54**	-.67**	.04	.10**	-.03	.16**
23	C.RES_G5								1	.71*	.03	-.08*	.05	-.14**
24	C.RES_G6									1	.01	-.08*	.09*	-.11*
25	INCOME_G3										1	.27**	-.22*	-.04
26	MARRY_G3											1	-.26**	-.05
27	AA												1	-.04
28	TEMP_54MO													1

***Note.* *=*p*<.05; **= *p*<.001.** N=1081 for all variables except for correlations with Marital conflict and conflict resolution (N=863).TPRE – Mother child relationship quality, INTIMACY – Marital Intimacy, MADEP – Maternal Depressive symptoms, BULLY –Bully Behaviors, VICTIM – Victimization behaviors, S-SUP –maternal social support, MAEMP – maternal employment status, M.CONFL –Marital Conflict, C.RES - Conflict Resolution, INCOME – Maternal Income, MARRY – Maternal marital status, AA – African American, TEMP_54MO – Temperament (Anger) at 54 months.

Table 3. Descriptives of Study I Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mean	9.08	8.73	8.96	63.06	62.19	61.41	1.84	1.80	1.76	1.21	1.29	1.37	3.87	3.86	3.83	.76
SD	8.85	8.62	8.82	7.47	7.76	8.28	.79	.77	.72	.42	.45	.51	.89	.96	.99	.43
% Missing	3.41	4.12	3.71	3.31	4.43	3.71	6.70	7.45	7.17	6.41	7.28	7.06	21.95	24.97	25.27	0.00
Skewness	1.52	1.70	1.54	-.66	-.58	-.62	1.24	1.14	1.29	2.99	1.79	1.93	-.73	-.73	-.68	-1.19
S.E.	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08
Kurtosis	2.59	3.40	2.63	.20	.06	.21	1.78	1.25	2.17	12.43	3.04	5.27	-.01	-.29	-.41	-.58
S.E.	.15	.15	.15	.15	.15	.15	.16	.16	.16	.16	.16	.16	.17	.17	.17	.15

Table 3 contd. *Descriptives of Control Variables*

		17	18	19	20	21	22	23	24	25	26	27	28
Mean		.76	.76	5.12	5.11	3.55	3.37	3.37	6.13	5.50	4.39	.13	4.74
SD		.43	.43	.70	.79	1.50	1.50	1.51	11.85	12.96	3.77	.33	.82
% Missing		3.10	3.10	3.41	4.12	21.9	20.2	22.3	20.4	0.00	0.00	0.00	9.1
	Skewness	-1.24	-1.20	-1.03	-1.33	.75	.89	-.81	-.80	2.52	-.36	2.24	-.24
	S.E.	.08	.08	.08	.08	.09	.09	.09	.09	.08	.07	.07	.08
	Kurtosis	-.47	-.56	1.59	2.14	.09	.53	.37	.32	8.99	-1.88	3.00	.08
	S.E.	.15	.15	.15	.15	.17	.17	.18	.17	.16	.13	.13	.16

Note. N=1081 for all variables except for correlations with Marital conflict and conflict resolution (N=863).

Structural Model Results for Study I

Models without Marital Conflict and Conflict Resolution (N=1081)

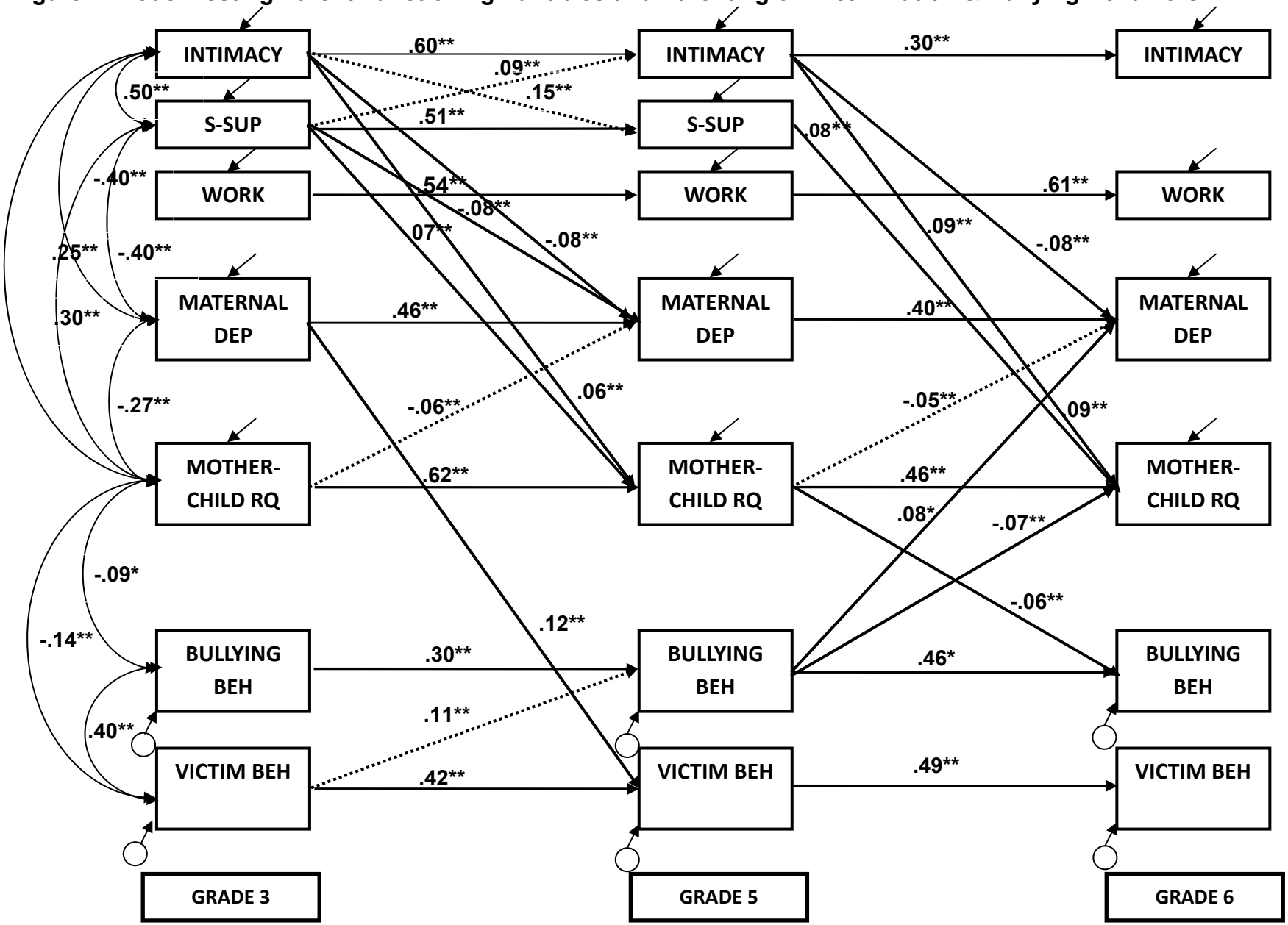
Overall Model Fit: Four models were estimated. The baseline mode (model 1A) was the model specified according to Belsky's proposed pathways as originally described in Figure 1. Using Belsky's model in a crossed lagged design, all grade 3 variables were regressed on temperament. Next, maternal depressive symptoms at grade 5 and mother-child relationship quality at grade 5 was regressed on stress and protective factors (marital intimacy, social support and employment status) at grade 3. Child outcomes (bullying and victimization behaviors) at grade 5 were also regressed on mother-child relationship quality at grade 3. These pathways were also estimated at grade 6 where maternal depressive symptoms at grade 6 and mother-child relationship quality at grade 6 was regressed on stress and protective factors (marital intimacy, social support and employment status) at grade 5. Bullying and victimization behaviors at grade 6 were also regressed on mother-child relationship quality at grade 5.

To test the additional hypotheses for study 1, two other models were estimated as a buildup on the baseline model through constraining of paths. In model 1B, in addition to 1A, maternal depressive symptoms at grades 5 and 6 were regressed on bullying and victimization behaviors at 3 and 5 respectively, to test the direct effects of bullying and victimization on maternal depressive symptoms over time (hypothesis 1.6). In model 1C, as a buildup from model 1B the bullying and victimization variables at grades 5 and 6 were also regressed on marital intimacy at grades 3 and 5 respectively to test the direct effects of marital intimacy on the outcome variables over time (hypothesis 1.5).

Of the three models, the most parsimonious model was determined by examining the fit statistics of the three models and the statistical significance of their coefficients, as well as with theory. Fit statistics for each model are presented in Table 4. Model 1B had slightly better fit statistics compared to Model 1A. In addition, the added path from bullying behaviors to maternal depressive symptoms was significant from grade 5 to grade 6. Model 1C had slightly better fit statistics than 1B, however, the additional hypothesized paths estimated were not statistically significant. Therefore, model 1B was selected as the best of the three models. However, fit statistics for Model 1B indicated that there may be other important cross-lagged paths not estimated in any of the three models. As a result, a fourth model (1D) was estimated in which, additional paths were added to Model 1B. All possible cross - lagged paths between Belsky's dimensions that were not hypothesized in the study were estimated.

Model 1D best fit the data compared to the other three models and was selected as the final model (χ^2 = 262.50, *df* = 120, RMSEA = .03; CFI = .98; SRMR =.03, AIC = 66553.19). Model 1D is Belsky's model with the addition of direct paths from the outcomes to maternal depressive symptoms (1B) and the inclusion cross-lagged non hypothesized paths. Figure 4 represents the final model with only the significant paths outlined. Significant non-hypothesized paths are shown in the final model as broken lines. Fit statistics of the four models are reported in Table 4. All estimates of the final model (1D) are delineated in Table 5.

Figure 4. Model Testing Parent Functioning Variables and Parenting on Victimization & Bullying Behaviors



Note. Only significant paths shown in the model. χ^2 = 262.50, *df* = 120, RMSEA = .03; CFI = .98; SRMR =.03. All reported estimates are standardized. ***=*p*<.05; **= *p*<.001.** RMSEA= Root Mean Squared Error of Approximation, CFI = Criterion Fit Index, TLI = Tucker Lewis Index, SRMR = Standardized Root Mean Square Residual, AIC = Akaike Index Criteria

Table 4. Model fit statistics for Study I Model (excluding marital conflict and conflict resolution Variables (N=1081).

	χ^2	*Df*	RMSEA	CFI	TLI	SRMR	AIC
Model 1A (Belsky's original model)	837.72	145	.07	.91	.81	.07	67124.10
Model 1B	822.76	141	.07	.91	.83	.07	67116.88
Model 1C	810.99	137	.07	.91	.82	.07	67111.99
Model 1D (1B Including cross lagged paths)	**262.50**	**120**	**.03**	**.98**	**.96**	**.03**	**66553.19**

Note. Model 1A: Paths as estimated in Belsky's original model controlling for child characteristic. 1B: 1A + outcomes regressed on maternal depressive symptoms. 1C: 1B + outcome regressed on Marital Intimacy. 1D = 1B+ non hypothesized cross-lagged paths. RMSEA= Root Mean Squared Error of Approximation, CFI = Criterion Fit Index, TLI = Tucker Lewis Index, SRMR = Standardized Root Mean Square Residual, AIC = Akaike Index Criteria.

Guided by Figure 4, the significant pathways will be described in five sections; (1) Effects of stress and protective factors on maternal depression and mother-child relationship quality over time (2) effects of maternal depression on mother-child relationship quality and child outcomes over time (3) effects of child outcomes on maternal depressive symptoms and mother-child relationship quality over time and (4) significant indirect effects (5) effects of temperament on all predictors at grade three, and lastly, (6) effect of parent covariates on all predictors at grade three. As a cross-lagged model, estimates in the model were controlled for in previous time points.

***1). Effects of Stress and Protective Factors on Maternal Depressive Symptoms and Parenting Over time*.** Figure 4 shows that there were small significant positive effects of marital intimacy at grades 3 and 5 on parent-child relationship quality at grades 5 and 6 respectively. There was also a significant negative effect of marital intimacy at grades 3 and 5 on maternal depressive symptoms at grade 5 and 6 respectively. These

significant paths indicate that higher maternal reports of marital intimacy at grades 3 and 5 predicted increased mother-child relationship quality, and decreased maternal depressive symptoms at grades 5 and 6. Marital intimacy at grade 3 also predicted increased social support at grade 5, controlling for previous time points for each regression.

For social support, a similar trend emerged at grade 5. There were small significant positive effects of social support at grade 3 on marital intimacy at grade 5 and mother-child relationship quality at grades 5. Also social support at grade 5 significantly predicted mother-child relationship quality at grade 6. Social support also negatively predicted maternal depressive symptoms at grade 5. Thus, higher maternal reports of social support at grade 3 predicted increased marital intimacy at grade 5 as well as increased mother-child relationship quality both at grades 5 and 6, controlling for previous time points for each regression.

(2). Effects of Maternal Depressive Symptoms on Mother-child Relationship Quality and Child Outcomes Over time. Maternal depressive symptoms at grade 3 significantly and positively predicted victimization in children at grade 5, indicating that higher maternal depressive symptoms at grade 3 increased reports of victimization in children when in grade 5, although these effects were small.

The estimated effects of maternal depressive symptoms at grades 3 and 5 on mother-child relationship quality at grades 5 and 6 were not significant though within - and between time correlations were significant. However, the opposite effect which was not hypothesized in Belsky's model was significant. Mother-child relationship quality at grades 3 and 5 negatively predicted maternal depressive symptoms at grades 5 and 6

respectively, suggesting that lower levels of mother-child relationship quality increased maternal depressive symptoms at grades 5 and 6, controlling for previous time points for each regression. This finding suggests that for this sample, mother child relationship quality at earlier time points was more predictive of maternal depressive symptoms at a later time than originally expected.

(3). Effects of Child Outcomes on Maternal Depressive Symptoms and Parenting Over time. Bullying at grade 5 predicted both maternal depressive symptoms and parenting at grade 6. Increased reports of bullying behaviors at grade 5 predicted an increase in maternal depressive symptoms and decreased mother-child relationship quality both at grade 6, controlling for previous time points for each regression. Again, these effects were small.

(4). Significant Indirect Effects. There were four significant indirect pathways in which higher marital intimacy and social support at grade 3 predicted decreases in both maternal depressive symptoms and bullying behavior at grade 6 through mother-child relationship quality at grade 5. Even though these paths were significant, the effects were near zero, thus reported here after as no significant indirect effects. All indirect paths estimated were also reported in Table 5.

(5). Effects of Child Temperament on all Predictors at Grade Three. Child temperament (anger scale) was significantly and negatively associated with only victimization behaviors and maternal depressive symptoms at grade 3 while significantly and positively associated with martial intimacy, mother-child relationship quality and social support at grade 3. In other words, higher levels of anger in children were associated with lower reports of being victimized and lower reports of maternal depressive symp-

toms. Higher levels of child anger were also related to higher reports of social support, marital intimacy and mother child relationship quality. The pathways for covariates were not shown in Figure 4 however all estimates are also reported in Table 6.

(6). Effects of parent Covariates on all Predictors at Grade Three. The three maternal covariates were marital status and income at grade 3, as well as maternal race/ethnicity. Also, child temperament (anger) as a child characteristic in Belsky's model was entered as a covariate. Marital status had significant negative associations with maternal depressive symptoms and maternal employment suggesting that being a single mother was associated with reports of higher depressive symptoms and higher unemployment compared to mothers who were married or living with a partner. Maternal income had positive significant associations with maternal intimacy also indicating higher levels of income was associated with higher levels of marital intimacy. Maternal ethnicity was positively associated with marital intimacy suggesting that being African American was associated with reports of marital intimacy compared to Caucasian and other ethnic groups.

Table 5. Standardized Estimates of the Final Model Testing Belsky's Parenting Process Model.

Parameter			Estimate	S.E.
Direct Effects				
INTIMACY@ G3	----->	INTIMACY@ G5	.60**	.03
		SO_SUP@G5	.15**	.03
		MAEMP@G5	.54**	.03

SO_SUP@G3	---->	SO_SUP@G5	.51**	.04
		INTIMACY@ G5	.09**	.03
		MAEMP@G5	.01	.03
MAEMP@G3	----->	MAEMP@G5	.54**	.03
		SO_SUP@G5	.05	.03
		INTIMACY@ G5	-.02	.03
MADEP@G3	------>	MADEP@G5	.46**	.03
		TPRE@G5	-.03	.03
		VICTIM@G5	.13**	.03
		BULLY@G5	-.04	.03
TPRE@G3	---->	MADEP@G5	-.07**	.03
		TPRE@G5	.62**	.03
		VICTIM@G5	-.01	.03
		BULLY@G5	-.04	.03
VICTIM@G3	---->	MADEP@G5	.02	.03
		TPRE@G5	.01	.03
		VICTIM@G5	.42**	.04
		BULLY@G5	.11**	.04
BULLY@G3	---->	MADEP@G5	-.04	.03
		TPRE@G5	-.04	.03
		VICTIM@G5	-.00	.04
		BULLY@G5	.30**	.05
INTIMACY@ G5	----->	INTIMACY@ G6	.43**	.04
		MAEMP@G6	-.01	.03
SO_SUP@G5	---->	INTIMACY@ G6	.02	.04
		MAEMP@G6	.00	.03
MAEMP@G5	----->	MAEMP@G6	.61**	.04

		INTIMACY@ G6	.03	.03
MADEP@G5	------>	MADEP@G6	.40**	.04
		TPRE@G6	0.03	.03
		VICTIM@G6	.04	.03
		BULLY@G6	-.02	.03
TPRE@G5	---->	MADEP@G6	-.05*	.03
		TPRE@G6	.46**	.03
		VICTIM@G6	-.03	.03
		BULLY@G6	-.06*	.03
VICTIM@G5	---->	MADEP@G6	-.03	.03
		TPRE@G6	0.01	.03
		VICTIM@G6	.49**	.04
		BULLY@G6	.03	.04
BULLY@G5	---->	MADEP@G6	.08	.03
		TPRE@G6	-.07**	.02
		VICTIM@G6	-.02	.03
		BULLY@G6	.46**	.04
INTIMACY@ G3	----->	INTIMACY@ G6	.31**	.04
MAEMP@G3	----->	MAEMP@G6	,18**	.04
MADEP@G3	----->	MADEP@G6	.20**	.04
TPRE@G3	----->	TPRE@G6	.33**	.03
VICTIM@G3	----->	VICTIM@G6	.13**	.04
BULLY@G3	----->	BULLY@G6	.10**	.03
TEMP@54MOS	----->	INTIMACY@ G3	-.14**	.03
		SO_SUP@G3	-.09**	.03
		MAEMP@G3	.01	.04
		MADEP@G3	.19**	.03

		TPRE@G3	-.10**	.03
		VICTIM@G3	.08*	.03
		BULLY@G3	-.01	.03
Covariates				
AA	----->	INTIMACY@ G3	.14*	.06
		SO_SUP@G3	-.05	.06
		MAEMP@G3	.09	.06
		MADEP@G3	.06	.05
		TPRE@G3	.08	.05
		VICTIM@G3	.04	.06
		BULLY@G3	.02	.07
INCOME@G3	----->	INTIMACY@ G3	.15**	.06
		SO_SUP@G3	.00	.05
		MAEMP@G3	.05	.06
		MADEP@G3	.02	.05
		TPRE@G3	.04	.05
		VICTIM@G3	-.05	.06
		BULLY@G3	-.08	.07
MARRY@G3	----->	INTIMACY@ G3	-.02	.04
		SO_SUP@G3	-.00	.03
		MAEMP@G3	-.07*	.03
		MADEP@G3	-.11**	.03
		TPRE@G3	06	.03
		VICTIM@G3	-.04	.03
		BULLY@G3	-.04	.04

Indirect Effects (Non-standardized)	**Estimate (CI)**
INTIMACY@ G3 -> TPRE@ G5 -> VICTIM@ G6	-.002 (-.00-.00)

S-SUP@ G3 -> TPRE@ G5 -> VICTIM@ G6		-.002 (-.00-.00)
MAEMPM@ G3 -> TPRE@G5 ->VICTIM@ G6		-.002 (-.00-.00)
MADEP@ G3 -> TPRE@G5 ->VICTIM@ G6		.000 (-.00-.00)
INTIMACY@ G3 -> TPRE@ G5 -> BULLY@ G6		-.003 (-.00-.00)
S-SUP@ G3 -> TPRE@ G5 -> BULLY@ G6		-.004 (-.00-.00)
MAEMPM@ G3 -> TPRE@G5 ->BULLY@ G6		-.002 (-.00-.00)
MADEP@ G3 -> TPRE@G5 ->BULLY@ G6		-.000 (-.00-.00)
Residual Variances		
INTIMACY@G3	.98**	.01
INTIMACY@G5	.58**	.03
INTIMACY@G6	.52**	.03
SO_SUP@G3	.99**	.03
SO_SUP@G5	.64**	.03
MAEMP@G3	.99**	.01
MAEMP@G5	.71**	.03
MAEMP@G6	.48**	.04
MADEP@G3	.93**	.02
MADEP@G5	.68**	.03
MADEP@G6	.66**	.03
TPRE@G3	.98**	.01
TPRE@G5	.53**	.03
TPRE@G6	.43**	.03
VICTIM@G3	.98**	.01
VICTIM@G5	.80**	.03
VICTIM@G6	.68**	.03
BULLY@G3	.99**	.01

BULLY@G5	.86**	.03
BULLY@G6	.72**	.03

Note. ***=p<.05; ****= p<.001**. TPRE – Mother child relationship quality, INTIMACY – Marital Intimacy, MADEP – Maternal Depressive symptoms, BULLY –Bully Behaviors, VICTIM –Victimization behaviors, S-SUP –maternal social support, MAEMP – maternal employment status. All significant correlations are in bold.

Table 6. Within time correlation of all Study I variables in model 1D.

		1	2	3	4	5	6	7	8	9	10	11
1	TIMCY@G3											
2	)SUP@G3	50**										
3	AEMP@G3	.03	.00									
4	ADEP@G3	.40**	.40**	01								
5	'RE@G3	25**	30**	03	.27**							
6	CTIM@G3	.05	.03	.00	.14**	.14**						
7	JLLY@G3	.02	.06	.02	02	.09*	40**	1				
8	TIMCY@G5								1			
9	)SUP@G5								.45**	1		
10	AEMP@G5								-.00	-.02	1	
11	ADEP@G5								-.33**	-.34**	-.02	1
12	'RE@G5								.11**	.14**	.01	-.10**
13	CTIM@G5								-.00	.01	-.01	.09*
14	JLLY@G5								-.00	.02	.01	.09*
15	TIMCY@G6											
16	AEMP@G6											
17	ADEP@G6											
18	'RE@G6											
19	CTIM@G6											
20	JLLY@G6											

Table 6 contd. Within time correlation of all Study I variables in model 1D.

		12	13	14	15	16	17	18	19	20
1	INTIMCY@G3									
2	SOSUP@G3									
3	MAEMP@G3									
4	MADEP@G3									
5	TPRE@G3									
6	VICTIM@G3									
7	BULLY@G3									
8	INTIMCY@G5									
9	SOSUP@G5									
10	MAEMP@G5									
11	MADEP@G5									
12	TPRE@G5	1								
13	VICTIM@G5	-.04	1							
14	BULLY@G5	-.10**	.37**	1						
15	INTIMCY@G6				1					
16	MAEMP@G6				-.01	1				
17	MADEP@G6				-.40**	-.07	1			
18	TPRE@G6				.08*	.09*	-.09*	1		
19	VICTIM@G6				-.10**	-.04	.08*	-.06	1	
20	BULLY@G6				-.10**	-.02	.06	-.08*	.25**	1

Note. ***=*p*<.05; **= *p*<.001**. TPRE – Mother child relationship quality, INTIMACY – Marital Intimacy, MADEP – Maternal Depressive symptoms, BULLY –Bully Behaviors, VICTIM –Victimization behaviors, S-SUP –maternal social support, MAEMP – maternal employment status. All significant correlations are in bold.

Models Including Marital Conflict and Conflict Resolution (N=863)

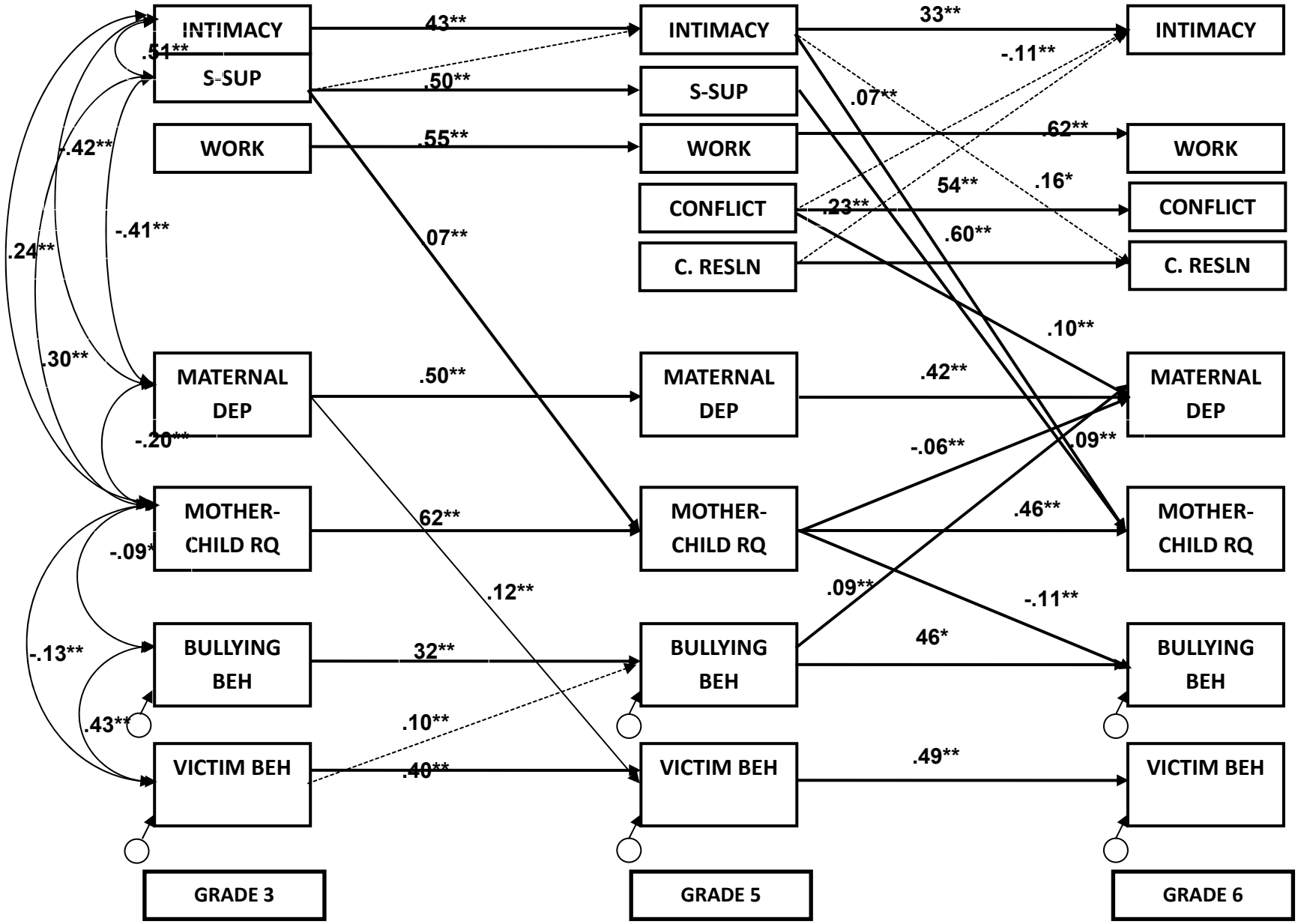
Models including marital conflict and conflict resolution as additional sources of stress were also run. These two variables were not included in earlier models using N=1081 because missing data on these variables were assumed not to be missing at random. Single mothers without partners were most likely to ignore spousal conflict and conflict resolution items during data collect. As a result the sample size to run these models were N=863. Also these two variables were measured only at grades 5 and 6. Conflict and conflict resolution by Belsky's definitions were stress and protective factors, thus in the following models there were five stress and protective factors estimated (as compared to three in earlier models). All other variables and estimated paths were the same as in earlier models.

Overall Model Fit. Similar models to models described earlier using N=1081 were estimated with the inclusion of marital conflict and conflict resolution as stress/protective factors. The baseline mode (model 2A) was the model specified according to Belsky's proposed pathways, where maternal depressive symptoms and mother-child relationship quality was regressed on stress and protective factors (marital intimacy, marital conflict, conflict resolution, social support and employment status) across grades 3, 5 & 6. Outcomes (bullying and victimization behaviors) were also regressed on parenting. Besides the baseline model two additional models were estimated to test the other hypotheses (Hypothesis 1.4, 1.5 and 1.5) as done in the first set of models. For these, marital conflict and conflict resolution variables were included. Thus, for model 2B, in addition to model 2A, direct paths from the two outcome variables at grades 3 and 5 to maternal depressive symptoms at grades 5 and 6 were also estimat-

ed. In model 2C, in addition to model 2B, direct paths from marital intimacy at grade 3, marital intimacy, marital conflict, and conflict resolution at grade 5 on the two outcome variables at grades 5 and 6 respectively were estimated. Of the three models, similar to the first set of models reported earlier, model 2B was a better fitting model compared to Model 2A but worse in fit compared to Model 2C. However, no new information was given by model 2C as the additional paths from the three marital relations variables to bullying and victimization were not significant. A fourth model (2D) was then estimated which was model 2C and the addition of non-hypothesized possible cross lagged paths. Inclusion of these paths allowed for the examination of other possible paths not previously hypothesized in Belsky's model. Fit statistics of the four models are summarized in Table 7.

The most parsimonious model was again determined by examining the fit statistics. The final model selected was Model 2D (χ^2 = 634.05, *df* = 183, RMSEA = .06; CFI = .95; SRMR =.08, AIC = 69753.14). Similar to Model 1D, this is Belsky's model with the addition of direct paths from the outcomes to maternal depressive symptoms (2B) and the inclusion of possible non-hypothesized cross lagged paths. All significant paths of the final model are depicted in Figure 5. The bold lines in Figure 5 represent significant hypothesized paths while the paths with broken lines represent significant non-hypothesized paths. All significant and non-significant estimates of model 2D are reported in Table 8.

Figure 5. Model testing parent functioning variables and parenting on victimization & Bullying Behavior (N=863)



Note. χ^2 = 634.58, *df* = 183, *p* < 0.001, RMSEA = .06; CFI = .95; SRMR =.08. All reported estimates are standardized. ***=*p*<.05; **= *p*<.001.** RMSEA= Root Mean Squared Error of Approximation, CFI = Criterion Fit Index, SRMR = Standardized Root Mean Square Residual. AIC = Akaike Index criteria.

Table 7. Model fit statistics for Study I Model (including marital conflict and conflict resolution Variables (N=863).

	χ^2	*df*	RMSEA	CFI	TLI	SRMR	AIC
Model 2A (Belsky's original model)	1278.56	207	.08	.87	.77	.11	70401.37
Model 2B	1253.43	203	.08	.87	.77	.11	70380.15
Model 2C	1239.75	195	.08	.87	.76	.11	70379.20
Model 2D (Model 2B including non-hypothesized cross lagged paths)	**634.05**	**175**	**.06**	**.95**	**.89**	**.08**	**69757.98**

Note. Model 2A: Paths as estimated by Belsky's model. 2B: Outcomes regressed on maternal depressive symptoms in addition to 2A. 2C: Outcome regressed on Marital Intimacy in addition to 2B. RMSEA= Root Mean Squared Error of Approximation, CFI = Criterion Fit Index, TLI = Tucker Lewis Index, SRMR = Standardized Root Mean Square Residual, AIC = Akaike Index criteria.

Summary of Model Including Marital Conflict and Conflict Resolution (N=863).

Results are described under five sections: (1) significant hypothesized paths related to marital conflict and conflict resolution, (2) significant hypothesized paths similar to model without marital conflict and conflict resolution variables (Model 1B), (3) Significant indirect effects, (4) significant paths in Model 1D that was omitted in this model (2D), and lastly (5) other findings in Model 2D.

(1). Significant Hypothesized Paths Related to Marital Conflict and Conflict resolution. Maternal marital conflict and conflict resolution was measured only at grades 5 and 6. From Figure 5 (Model 2D), marital conflict at grade 5 significantly and positively predicted maternal depressive symptoms at grade 6 indicating that increased

reports of marital conflict at grade 5 predicted increased maternal depressive symptoms although effects were small. All estimates of the whole model are reported on Table 8.

(2). Significant Paths Similar to Model without Marital Conflict and Conflict resolution Variables. Significant paths that were similar to both models are (a) the effects of social support at grade 3 on parenting and marital intimacy at grade 5, (b) the effects of maternal depression at grade 3 on victimization behaviors at grade 5, (c) the effects of parenting at grade 5 on both maternal depression and bullying behaviors at grade 6 and (d) the effects of bullying behaviors at grade 5 on both maternal depressive symptoms and parenting at grade 6. Effects were small for all significant paths. Similar to model 1, higher rates of social support at grade 3 predicted increased mother-child relationship quality and marital intimacy at grade 5. Higher reports of maternal depressive symptoms at grade 3 predicted increased reports of victimization behavior at grade 5. Increased mother-child relationship quality at grade 5 predicted reduced at grade 6 and maternal depressive symptoms both at grade 6. Higher reports of bullying behavior at grade 5 predicted increased maternal depressive symptoms and decreased mother-child relationship quality both at grade 6.

The two significant indirect paths were social support at grade 3 through parenting practices at grade 5 to both maternal depressive symptoms and bullying behavior both at grade 6. However the total indirect effect was near zero, thus it is assumed that there were no significant indirect effects. All estimated indirect paths are also outlined in Table 8.

3). Significant Indirect Effects related to Marital Conflict and Conflict Resolution. The two significant indirect paths were (a) social support at grade 3 to maternal

depressive symptoms at grade 6 via parenting at grade 5 and (b) social support at grade 3 to bullying behavior at grade 6 via parenting at grade 5. All estimated indirect paths are also reported in Table 8.

(4). Significant paths in Model 1B that were not significant in model 2D. Additional paths were added to Model 2D because marital conflict and conflict resolution variables were included as stress and protective factors, as described in section1. Model 2D lost three significant paths found in Model 1B particularly from grade 3 to 5. These were the effects of marital intimacy at grade 3 on maternal depressive symptoms and mother-child relationship quality at grade 5. Lastly, the effect of social support at grade 3 on maternal depressive symptoms at grade 5 dropped from statistical significance.

(4). Other Findings in Model 2D. Besides the above significant paths, there were other significant findings related to the stress and protective factors. From Figure 5, marital conflict at grade 5 significantly and negatively predicted marital intimacy at grade 6. Conflict resolution on the other hand positively predicted marital intimacy at grade 6. Marital intimacy at grade 5 also positively predicted conflict resolution at grade 6. In summary, increased reports of marital conflict at grade 5 predicted decreased marital intimacy at grade 6. The alternate was also true, where increased marital intimacy at grade 5 significantly predicted an increase in maternal ability to resolve conflict at grade 6. Lastly, increased reports of conflict resolution at grade 5 predicted increased marital intimacy at grade 6. These paths were not hypothesized in the study however was included following the cross-lagged design. The model also fit best with inclusion of those paths compared to when they were omitted. All estimates are included in Table 8.

Table 8.Standardized Estimates for Model Including Marital Conflict and Conflict Resolution (N= 863).

Parameter			*B*	S.E.
Direct Effects				
INTIMACY@ G3	----->	INTIMACY@ G5	.43**	.04
		SO_SUP@G5	.09*	.04
		MAEMP@G5	-.02	.04
SO_SUP@G3	---->	SO_SUP@G5	.50**	.04
		INTIMACY@ G5	.10**	.04
		MAEMP@G5	.03	.03
MAEMP@G3	----->	MAEMP@G5	.55**	.03
		SO_SUP@G5	.03	.03
		INTIMACY@ G5	-.02	.03
MADEP@G3	----->	MADEP@G5	.50**	.04
		TPRE@G5	-.03	.03
		VICTIM@G5	.13**	.04
		BULLY@G5	-.04	.04
TPRE@G3	---->	MADEP@G5	-.06	.03
		TPRE@G5	.64**	.03
		VICTIM@G5	-.00	.04
		BULLY@G5	-.03	.04
VICTIM@G3	---->	MADEP@G5	-.00	.03
		TPRE@G5	.02	.03
		VICTIM@G5	.40**	.05
		BULLY@G5	.10**	.04
BULLY@G3	---->	MADEP@G5	-.02	.03
		TPRE@G5	-.04	.03

		VICTIM@G5	.04	.05
		BULLY@G5	.32**	.06
INTIMACY@ G5	----->	INTIMACY@ G6	.33**	.04
		MAEMP@G6	-.02	.03
		M.CONFL_G6	-.05	.03
		C.RES_G6	.16**	.03
SO_SUP@G5	---->	INTIMACY@ G6	.03	.03
		MAEMP@G6	.00	.03
		M.CONFL_G6		
		C.RES_G6		
MAEMP@G5	----->	MAEMP@G6	.61**	.04
		INTIMACY@ G6	.03	.03
		M.CONFL_G6		
		C.RES_G6		
M.CONFL_G5	------>	MADEP@G6	.10*	.04
		TPRE@G6	-.00	03
C.RES_G5	------>	MADEP@G6	-.03	.04
		TPRE@G6	-.00	.03
MADEP@G5	------>	MADEP@G6	.42**	.04
		TPRE@G6	-0.03	.03
		VICTIM@G6	.05	.04
		BULLY@G6	-.01	.03
TPRE@G5	---->	MADEP@G6	-.06*	.03
		TPRE@G6	.46**	.04
		VICTIM@G6	-.02	.03
		BULLY@G6	-.10**	.03
VICTIM@G5	---->	MADEP@G6	-.04	.03
		TPRE@G6	-.00	.03

		VICTIM@G6	.48**	.04
		BULLY@G6	.06	.04
BULLY@G5	---->	MADEP@G6	.09**	.03
		TPRE@G6	-.07**	.03
		VICTIM@G6	-.01	.03
		BULLY@G6	.47**	.04
INTIMACY@ G3	----->	INTIMACY@ G6	.20**	.04
MAEMP@G3	----->	MAEMP@G6	,18**	.04
MADEP@G3	----->	MADEP@G6	.14**	.04
TPRE@G3	----->	TPRE@G6	.35**	.04
VICTIM@G3	----->	VICTIM@G6	.16**	.04
BULLY@G3	----->	BULLY@G6		
TEMP@54MOS	----->	INTIMACY@ G3	-.14**	.03
		SO_SUP@G3	-.09	.03
		MAEMP@G3	.01	.04
		MADEP@G3	.19**	.03
		TPRE@G3	-.10**	.03
		VICTIM@G3	.08*	.03
		BULLY@G3	-.01	.03
Covariates				
AA	----->	INTIMACY@ G3	.00*	.04
		SO_SUP@G3	-.04	.04
		MAEMP@G3	.07	.04
		MADEP@G3	.08	.04
		TPRE@G3	.05	.03
		VICTIM@G3	.06	.05
		BULLY@G3	.08	.04
INCOME@G3	----->	INTIMACY@ G3	.15**	.06

		SO_SUP@G3	.00	.05
		MAEMP@G3	.05	.06
		MADEP@G3	.02	.05
		TPRE@G3	.04	.05
		VICTIM@G3	-.05	.06
		BULLY@G3	-.08	.07
MARRY@G3	----->	INTIMACY@ G3	-.02	.04
		SO_SUP@G3	-.00	.03
		MAEMP@G3	-.07*	.03
		MADEP@G3	-.11**	.03
		TPRE@G3	06	.03
		VICTIM@G3	-.04	.03
		BULLY@G3	-.04	.04

Indirect Effects (non-standardized)	**Estimate (CI)**
INTIMACY@ G3 -> TPRE@ G5 -> VICTIM@ G6	-.001 (-.00-.00)
S-SUP@ G3 -> TPRE@ G5 -> VICTIM@ G6	-.001 (-.00-.00)
MAEMPM@ G3 -> TPRE@G5 -> VICTIM@ G6	-.001 (-.00-.00)
MADEP@ G3 -> TPRE@G5 -> VICTIM@ G6	.000 (-.00-.00)
INTIMACY@ G3 -> TPRE@ G5 -> BULLY@ G6	-.002 (-.00-.00)
S-SUP@ G3 -> TPRE@ G5 -> BULLY@ G6	-.004 (-.00-.00)
MAEMPM@ G3 -> TPRE@G5 ->BULLY@ G6	-.005 (-.00-.00)
MADEP@ G3 -> TPRE@G5 ->BULLY@ G6	-.000 (-.00-.00)

Residual Variances		
INTIMACY@G3	.98**	.01
INTIMACY@G5	.58**	.03
INTIMACY@G6	.52**	.03
SO_SUP@G3	.99**	.03

SO_SUP@G5	.64**	.03
MAEMP@G3	.99**	.01
MAEMP@G5	.71**	.03
MAEMP@G6	.48**	.04
M.CONFL_G6	.54**	.03
C.RES_G6	.50**	.03
MADEP@G3	.93**	.02
MADEP@G5	.68**	.03
MADEP@G6	.66**	.03
TPRE@G3	.98**	.01
TPRE@G5	.53**	.03
TPRE@G6	.43**	.03
VICTIM@G3	.98**	.01
VICTIM@G5	.80**	.03
VICTIM@G6	.68**	.03
BULLY@G3	.99**	.01
BULLY@G5	.86**	.03
BULLY@G6	.72**	.03

Note. *=p<.05; **= p<.001**.** INTIMACY – Marital Intimacy, MADEP – Maternal Depressive symptoms, BULLY –Bully Behaviors, VICTIM –Victimization behaviors, S-SUP –maternal social support, WORK – maternal employment status.

3.5 Summary of Study 1 Main Findings

There were small significant effects of stress and protective factors on maternal functioning and parenting: Marital intimacy and social support at grades 3 and 5 predicted decreased reports of maternal depressive symptoms and increased mother child relationship quality both at grades 5 and 6, controlling for the previous time points. Increased reports of marital conflict at grade 5 also increased maternal depressive symptoms at grade 6.

There were also small significant effects of parent functioning on parenting and child outcomes, in that, increased maternal depressive symptoms at grade 3 predicted increased reports of child victimization at grade 5 controlling for the previous time point. Increased mother child-relationship quality at grade 5 also predicted decreased maternal depressive symptoms and decreased bullying behaviors both at grade 6 controlling for previous time points. Lastly, there were no indirect effects of depressive symptoms on bullying and victimization behaviors via mother-child relationship quality.

CHAPTER 4: METHODOLOGY AND RESULTS FOR STUDY II

Study II was designed as an extension of Study I in two ways. First, bystander behaviors in children were not studied in Study I. Current studies are examining the advantages and disadvantages of bystander behaviors in hopes of intervening with positive bystander behaviors. In line with this goal, Study II was designed to examine how parent factors were related to bystander behaviors in addition to bullying and victimization behaviors. Secondly, new parent factors were examined using Belsky's model, in addition to those tested in Study I. Parents' self-efficacy to parent, to know when their child was being victimized and to know what to do when their child was being victimized were studied as parent functioning variables. Parental monitoring and supervision was also studied as the parenting variable. Lastly, study II used more robust measures of bullying and victimization behaviors. The similarities and differences in variables and the populations for the two studies are summarized in Table 9.

Table 9. Comparison of Study I and Study I Methodologies.

	Study I	Study II
Research Design	Longitudinal	Cross-sectional
Domains of Belsky's model : Parent Functioning	• Maternal Depressive symptoms	• Parental Self Efficacy • Parental Bullying Self-efficacy
Parenting	• Maternal-child relationship quality	• Parental Monitoring and Supervision
Child outcomes	• Bullying Behaviors • Victimization Behaviors	• Bullying Behaviors • Victimization Behaviors • Bystander Behaviors (3 kinds)
Stress and Support Factors	• Social support • Employment status • Marital Intimacy • Maternal Conflict • Conflict Resolution	-
Parent Ethnicity	• 83.7% White • 11.8% African American • 4.5% other Races	• 72.7% white • 17.5% African American • 6.4% Other Races
Child Ethnicity	• 81.3% White • 11.9% African American • 6.8% other Races	• 62.9% white • 19.9% African American • 19.6% Other Races
Child Grades	3, 5 & 6th grades	3rd and 4th grades
Sample size (parent-child dyads)	1081	143
Data collection sites	10 sites across the US.	Southeastern City
Analytic Plan	Cross lagged structural Equation modeling	Structural Equation Modeling

4.1 Study II:

Participants & Procedure

Participants for Study II comprised of parents and children attending an elementary school (4th-5th grades) in a small urban southeastern city. Data were collected from a parent and child survey as part of a larger project funded by Center for Disease and

Control (Joel Meyers, PI). For the parent survey, 81% of respondents were mothers, 72% of parents were Caucasian, and 18% were African American. In terms of marital status, 75% of all parents were married or living with a partner, while 21% were single (never married, divorced or widowed). For the child survey, 59% of the students were Caucasian, 17% African American, while 52% of student respondents were in fourth grade. Two hundred and fifty nine parents and 189 children participated in the study. Of that number there were 143 parent-child pairs. Detailed demographics for both the parents and children are reported in Table 10.

***Parent survey procedure*:** School administrators notified all parents about the survey by email, PTA website and by letters. Survey packets were then sent home to parents in the homework folders of each student. Each packet consisted of a cover letter, consent form and survey. Completed and sealed surveys were returned to school for pickup by a research staff. Participation in the survey was voluntary.

Of the surveys that were distributed in three rounds, 321 of them were returned. Of that number, 259 survey data were entered for analyses. Excluded surveys (62) were either returned blank, incomplete or were duplicates from the same parent.

The 2– page survey, adapted from existing measures, asked questions about parent's perceptions about school safety, their values and beliefs about social situations children often found themselves in, as well as how parents monitored their children at home and in school. All items were scored on a Likert scale with varying ranges per measure. The three parent measures used were adapted versions of Bandura's Self-efficacy scale (Bandura, 1989; 1990), Kim's Bullying self-efficacy scale (Kim, Varjas,

Henrich & Meyers, 2010), and the parental supervision and monitoring scale by Kerr & Stattin (2000).

Table 10. Study II Survey Demographics (N=143).

Demographic	Categories	N	%
Parent Race	White	104	72.7
	African American	28	19.9
	Hispanic/Latino	5	3.5
	Other	4	2.9
Marital Status	Married/living together	107	74.8
	Single (never married, divorced, widowed)	35	24.5
Parent Respondent	Mother	118	82.5
	Father	19	13.3
	Guardian/other	2	1.4
Child Race	White	90	62.9
	African American	25	17.5
	Hispanic/Latino	4	2.8
	Multi-racial	9	6.3
	Other	15	10.5
Grade	4th Grade	79	55.2
	5th Grade	64	44.8

***Child survey procedure*:** Child data were collected during the winter/spring term of year 2013. Parents were first asked to give consent for their children to participate in the new phase of the ongoing longitudinal bullying study in the school. Only students who had parental consent were invited to participate.

Students completed an online battery of questionnaires related to school safety, social, moral and violent behavior (See Appendix B for list). This included the Student Comprehensive Assessment of Bullying Behavior (SCABB; Varjas, Henrich & Meyers, 2009). This assessment measured bullying, victimization, bystander behaviors, as well

as student perceptions of school safety. For this study only bullying, victimization, bystander behavior measures were used.

The child survey was administered online in school during scheduled times within a two-week period. Students responded to survey items on laptops that were set up in the gym. There were a minimum of four school psychology and/developmental psychology graduate research assistants everyday to read the child assent forms to each student prior to the onset of the survey. Students were reminded that participation was voluntary with no negative consequences if they declined participation. They could also complete the survey the next day if they felt tired during the process. Each student had a unique ID that was used to access the survey. The average time used by the students was 30 minutes.

Data collection occurred three days in the first week and two days in the second week. Students who were absent during the first week participated in the second week. Of the 185 students who received parental consent, 16 declined to participate after reading the child consent form or at the early onset of the survey. As a result, there were 169 completed child surveys at the end of the data collection period.

Data merging procedure: Parent and corresponding child data were using parent and corresponding child ID. The final sample size for study II analyses was 143, which represented approximately 55% of parents and 85% of children who completed the surveys.

4.2 Measures For Study II

Parent Functioning and well-being:

Guided by Belsky's (1984) original model, two measures were used to assess parent functioning and well-being according (Figure 3).They are Bandura's Parent Self – Efficacy Scale and Kim Bullying Self-Efficacy Scale. See Appendix C for adapted items for both measures.

Bandura's Parent Self –Efficacy Scale (BPSES). Items from two dimensions of Bandura's (1989, 1990) Multi-dimensional Scales of Perceived Self-efficacy (MSPSE) questionnaire were adapted for this study. The two dimensions were (a) Self-efficacy to influence school-related performance [3 items selected]; (b) self-efficacy in setting limits, monitoring activities and influencing peer affiliation [4 items selected]. The seven items from these two dimensions were selected because they were worded in sentences that could assess self-efficacy related to bullying and victimization behaviors. Specifically, these items asked parents how much they could help keep their children from being bullied, from bullying others, get help from the school and/ get help from other parents for problems of bullying.

The MPSES with its subscales have established reliability and validity in middle school parent samples (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001; Caprara, Barbaranelli, Borgogni, Pettita, & Rubinacc, 2003). The 7-item measure adapted for parents in this study was internally consistent (α = .79).

Similar to the original scale, scores ranged from 1 (nothing) to 9 (a great deal) with higher scores indicating higher parental self-efficacy.

Kim Parent Bullying Self-Efficacy Scale (KPBSES). This was originally a 26 item scale that measured the self-efficacy of students' ability to cope with bullying and victimization (Kim, Varjas, Henrich & Meyers, 2010). The knowledge factor (5 items) of the scale was adapted to measure parent's knowledge of bullying and victimization behaviors their children face or participate in and their self-efficacy in handling related situations (see Appendix C, Sections A13a-e).

Reliability and validity analyses have found the child version of this self-efficacy scale to be related in expected directions with victimization and well-being (Kim, Varjas, Henrich & Meyers, 2010; Venegas, 2008). The internal consistency score of the five items in the adapted parent version was α =.70.

Responses were rated on a 5-point Likert scale similar to the original scale, where scores ranged from 1 (not sure) to 5 (really sure). Higher scores on each score indicated greater parental knowledge and self-efficacy in handling bullying and victimization related issues children face.

Parenting:

Parental Supervision and Monitoring Scale (Kerr & Stattin, 2000). Seven items were taken from the parental supervision and monitoring scale developed by Kerr & Stattin, (2000). These items asked about parents' involvement and monitoring of their child's activities (see Appendix C, Section A6-12).

This parent version of the scale was high in internal consistency (NICHD Early Child Care Research Network, 2005) and validity (e.g. Crouter & Head, 2002; Eaton et al., 2008; Kerr et al., 2010). The score for the seven items was α = .65.

Responses were rated on a 4- point Likert scale, ranging from 1(almost never) to 4 (almost always). Scores were computed as the mean of the seven responses, with higher values indicating greater parental monitoring.

Covariates (Parent demographics)

Data were collected on parent demographics, and included the gender of parent responding, marital status, parent's age range, parent's race/ethnicity, and the number of years of the child in the school.

Child Outcomes:

The Comprehensive Assessment of Bullying Behaviors (Varjas et al., 2009) comprises of bullying and victimization questions originally from the Survey of Bullying Behavior – Revised (SSBR; Varjas, Henrich & Meyers, 2009) and questions assessing bystander behaviors. The scoring scale for bullying and victimization behavior was expanded to a 5-point scale by the authors to be parallel the scale of Olweus' survey.

For ***bullying behaviors***, twelve items asked students how often they picked on younger and less powerful students (e.g. by kicking them, spreading rumors or threatening them). The bullying scale had high internal consistency, $\alpha = .80$ (Varjas, Henrich & Meyers, 2009). Four items each tested physical, verbal and relational bullying behaviors. Responses were rated on a 4-point Likert scale which ranged from 1 (not at all) to 4 (once a week or more). Total scores were computed as the sum of raw scores on each scale, with higher scores indicating more bullying behaviors.

To assess ***victimization behaviors*** (12 items), students' rated how often older, bigger or powerful kids picked on them in various ways (e.g. kicking, teasing, spreading rumors). The internal consistency score was $\alpha = .85$ (Varjas, Henrich & Meyers, 2009).

Responses were rated on a 4-point Likert scale which ranged from 1 (not at all) to 4 (once a week or more). Total scores were computed as the sum of raw scores on each scale, with higher scores indicating more victimization.

Both bully and victimization items measure verbal, physical and relational forms of bully however, the items were used as one general factor instead of two because Varjas et al., (2006) found that higher order bully and victimization construct best represented the data.

Lastly, ***bystander behaviors*** (12 items) were measured by questions that examined students' response when they saw bullying occur. Researchers have categorized bystander behaviors into negative/ reinforcing, positive/defending behavior and avoidant/passive behaviors (e.g. Henrich 2013; Pöyhönen & Salmivalli, 2012; Salmivalli et al., 1996; Vanegas, 2008 & Varjas et al., 2009). Of the 12 items in the comprehensive assessment scale (Varjas et al., 2009); three items reflected reinforcing behaviors, five items for defending behaviors and five items for avoidant bystander behaviors. The following are examples of the three bystander behaviors respectively. "When you see one kid picking on another kid, how often do you do the following: a. "I join up with the kid being mean." b. "I tell an adult." c. "I do nothing".

Internal consistency scores for this study were high across all three behaviors: Negative/Reinforcing Behavior scale (α = .76); positive/defending behavior scale (α = .77) and avoidance scale (α = .71).

Responses were rated on a 4-point Likert scale which ranged from 1 (almost never) to 4 (almost always). Total scores were computed as the sum of raw scores on each scale, with higher scores indicating more bystander behaviors.

4.3 Plan of Statistical Analyses for Study II

Exploratory factor analysis was used to establish the factor structure of the self-efficacy measures. Next, a structural equation model estimating Belsky's main domains was tested. Structural equation modeling (SEM) is a statistical analytic technique that assesses entire models simultaneously. Thus, compared to other techniques, it gives more accurate estimates of pathways and effect sizes of variables within a model with more accurate estimates and standard errors (Kline, 2011). Maximum likelihood with robust estimation (MLR) was the estimator used in the analyses. MLR is robust to violations of non-normality. Similar to Study I, RMSEA, CFI, TLI and SRMR were reported and used to evaluate overall model fit for Study II as well.

4.4 Results for Study II

Factor Analyses of Parent Self-Efficacy

Exploratory factor analysis was done to determine the factor structure of the two sets of parent self-efficacy items from Bandura's self-efficacy scale (BPSES; 7items; Bandura, 1989) and Kim's Bullying self-efficacy scale (KBPSES; 7items Kim et al., 2010). Factor analysis was done using Mplus v.7 (Muthen & Muthen, 2010), with robust maximum likelihood estimation, promax rotation and a parent sample size of 255. Guided by fit statistics a three factor solution was selected. The three factor solution provided meaningful factors in terms of item loading. The three factors are Bandura's Self-efficacy scale (BPSES; 7items) and two sub-scales for Kim's Bullying self-efficacy measure. The first sub –factor (KBPSES_K) had two items related to *parental* knowledge of whether their children were bullied (α= .62), while the second sub-factor

(KBPSES_A) had three items related to what parents *knew to do* when their children were bullied (α= .78).

The two sub-factors clearly differentiated two themes- knowledge of bullying situations and what to do with bullying situations when parents knew, thus, the two factors were used in the analyses. Table 11 represents correlations and factor loadings of the three self-efficacy measures -Bandura's parental self-efficacy to parent (BPSES), parental knowledge of whether their children are being bullied (KBPSES_K) and parent's self-efficacy in knowing what to do (action) when their children are bullied (KBPSES_A).

Descriptive statistics For Study II

Table 12 shows descriptive statistics for all the variables used in the final analyses. Information on correlations, missing data and other descriptives are also reported. From the table, the correlations between the predictors and outcome variables ranged between .01 and .26. The strongest correlations were between the five outcomes, particularly between bully and victimization, defending and negative/assisting bystander behaviors.

Each covariate associated significantly with different variables. Mother respondents compared to father respondents were negatively correlated with bullying behavior and was positively correlated with victimization behaviors. Single parents compared couples had a positively association with Bandura's parental self-efficacy only. Lastly, maternal race (African American vs. white and others) was positively associated with Bandura's parental self-efficacy, efficacy to act and being a single mother.

Table 11. Correlations and Factor Loadings of the Self-Efficacy Measures used in Study (N = 255).

	Factor 1 **KBPSES_A**	Factor 2 **KBPSES_K**	Factor 3 **BPSES**
How sure are you that you..a. Know the difference between bullying and teasing?	**.31**	.25	.16
How sure are you that you..b. Know if your child is being bullied in school?	-.06	**1.15**	.001
How sure are you that you..c. Know if your child is being bullied online?	.06	**.33**	.018
How sure are you that you..d. Know what to do when someone bullies your child in school?	**.89**	-.06	-.02
How sure are you that you..e .Know what to do when someone bullies your child online?	**.76**	-.01	-.00
How much can you do to help your child enjoy school?	.19	-.03	**.54**
How much can you do to discourage your child from skipping school?	-.03	-.10	**.48**
How much can you do to get your child to stay out of trouble in school?	.08	.03	**.69**
How much can you do to keep track of what your child does when outside the home?	-.03	-.00	**.60**
How much can you do to get your child to associate with friends who are good for him /her?	.06	-.09	**.63**
How much can you do to instill your values in your child?	-.08	-.01	**.60**
How much can you do to keep your child from going to dangerous areas and playgrounds?	-.16	.10	**.69**
Correlations			
KBPSES_A	1	.34	.39
KBPSES_K		1	.26
BPSES			1

Note: Maximum Likelihood Estimation; Rotation =Promax; KBPSES_A = Parent self-efficacy related to ; KBPSES_K = ; BPSES = Bandura's self-efficacy scale

Table 12. Descriptive Statistics for Study II Variables.

		1	2	3	4	5	6	7	8	9	10	11	12
1.	BPSES												
2.	KBPSES_K	.30**											
3.	KBPSES_A	.23**	.50**										
4.	P_Monitor	.42**	.24**	.16									
5.	Bullying Beh	.09	-.11	.04	.12								
6.	Victimization	.01	-.14	.09	.01	.52**							
7.	Defending	.04	-.04	.01	.09	.08	.21*						
8.	Avoidant	.09	.04	-.05	.04	.25**	-.01	-.04					
9.	Negative	.04	.03	-.10	-.06	.20*	.09	.11	-.43**				
10.	Mother	-.06	-.04	-.09	.15	-.18*	.25**	-.01	-.09	.05			
11.	Single	.20*	-.05	.11	.04	.03	.12	.02	-.01	-.02	.09		
12.	A. American	.32**	.14	.19*	.15	.12	-.04	-.08	.10	-.06	-.01	.39**	
Mean		7.90	12.20	6.92	3.69	1.13	1.26	12.37	.81	1.07	.83	.25	.20
SD		.76	2.63	2.40	.28	.07	.14	3.68	.12	.14	.38	.43	.40
% Missing		.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Skewness		-.52	-1.29	-.25	-.53	1.59	.51	.34	1.02	-.52	-1.73	1.19	1.55
SE		*.20*	*.20*	*.20*	*.20*	*.20*	*.20*	*.20*	*.20*	*.20*	*.20*	*.20*	*.20*
Kurtosis		-.28	2.00	-.88	-.67	1.92	-.48	-.29	.82	.39	1.00	-.60	.41
SE		*.40*	*.40*	*.40*	*.40*	*.40*	*.40*	*.40*	*.40*	*.40*	*.40*	*.40*	*.40*

Note: N= 143; * p-value <.05; ** p-value <.001; BPSES =Bandura's parental self-efficacy scale; KBPSES_K = knowledge factor of the Kim Parent Bullying Self-Efficacy Scale; KBPSES_A = Action factor of the Kim Parent Bullying Self-Efficacy Scale; P_Monitor = Parental monitoring and supervision.

Statistical Analyses for Study II

The two sets of hypotheses for this study were:

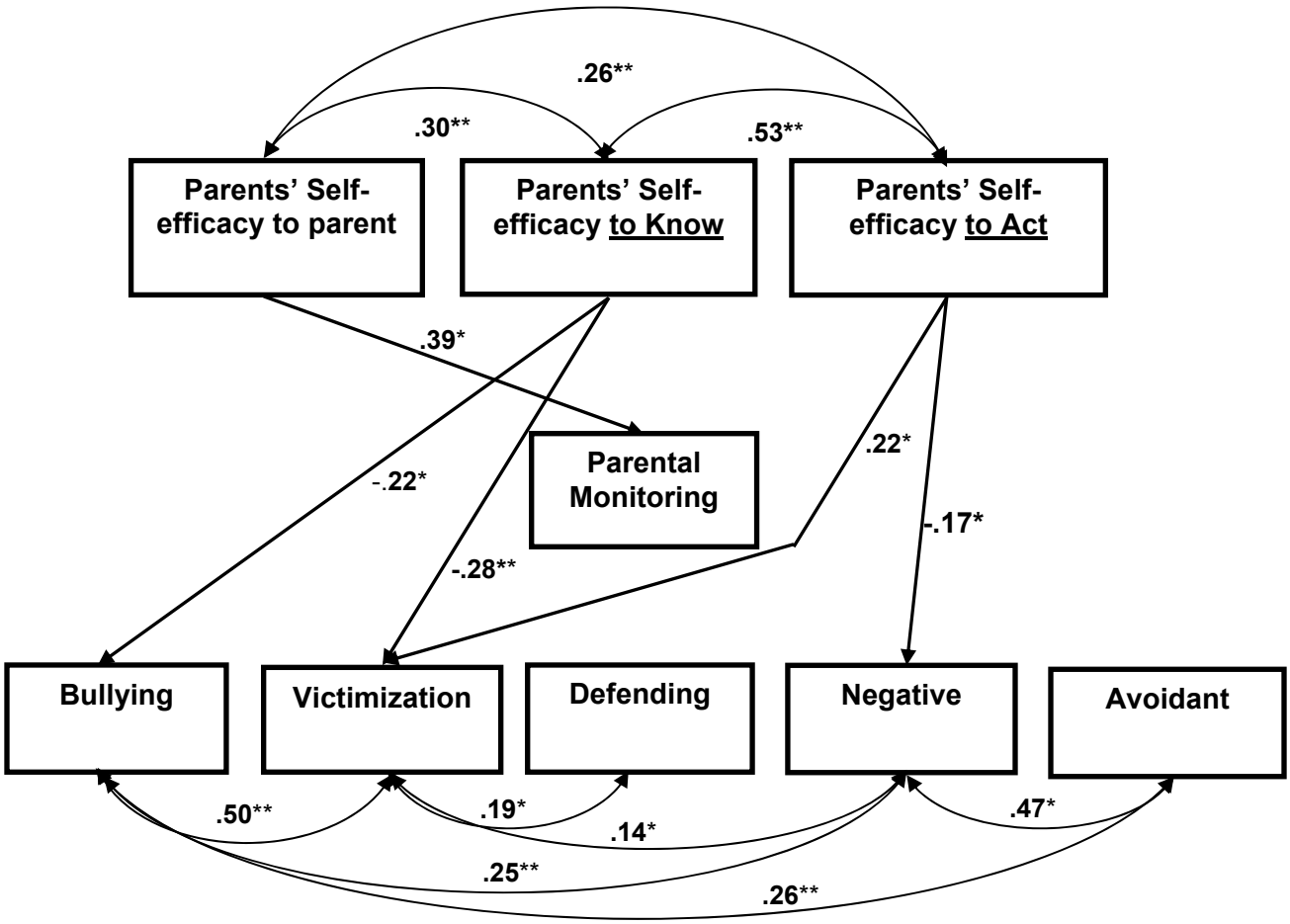
(2.1) Parents' self-efficacy to parent (BPSES), parents' self-efficacy to know when their children are being victimized (KBPSES_K) and parents' self-efficacy to know to act on that knowledge (KBPSES_K) would be directly and negatively associated with bullying, victimization, negative and avoidant bystander behaviors, while positively associated with defending behaviors.

(2.2) Through indirect pathways, parents' self-efficacy to parent (BPSES) and parental self-efficacy related to bullying and victimization (KBPSES_A and KBPSES_K) would be positively associated with maternal monitoring and supervision which in turn would be negatively associated with bullying, victimization, negative and avoidant bystander behaviors . Monitoring and supervision would however be positively associated with defending behaviors.

To test these hypotheses, both direct and indirect effects were estimated simultaneously in one model as depicted in Figure 3 (chapter 2). The covariates were also entered in the regression. The results of the overall model with only significant paths are shown in Figure 6. All standardized estimates of this model are reported in Table 13.

Next, because there were significant correlations between bullying and victimization, and between defending and negative bystander behaviors, a set of models testing the unique associations of the parent predictors with each outcome were run, controlling for all other child outcomes. All estimates of each unique model are reported in Appendix A.

Figure 6. Whole model with only significant paths for SEM between all child outcomes and all parent predictors



Note. * *p* <.05; ** *p ≤.01.* * p-value <.05; ** p-value <.001; BPSES =Bandura's parental self-efficacy scale; KBPSES_K = knowledge factor of the Kim Parent Bullying Self-Efficacy Scale; KBPSES_A = Action factor of the Kim Parent Bullying Self-Efficacy Scale; P_Monitor = Parental monitoring and supervision.
All standardized estimates of model reported in Table 13.

Results From The Whole Model

As indicated in Figure 6, the significant pathways in the whole model were (1) the direct path between parents' self-efficacy to parent (BPSES) and parental monitoring, indicating a

positive direct association between parents' self-efficacy (BPSES) to monitor school activities and set limits on parental monitoring and parental monitoring . (2) Secondly, there was a significant direct and negative effect of parental knowledge of whether their children were victimized (KBPSES_K) on bullying behaviors. In other words, higher levels of parental knowledge and awareness of bullying events were associated with fewer reported rates of bullying behaviors. (3) Both parental knowledge of whether their children are being bullied (KBPSES_K) and parent's self-efficacy in knowing what to do (action) when their children are bullied (KBPSES_A) had significant direct effects on victimization; however, whereas parents' knowledge of victimization (KBPSES_K) had a negative effect, parents' competence in what to do about that knowledge (KBPSES_A) had a positive effect on victimization. In other words, higher levels of parental knowledge and awareness of victimization was associated with less victimization, whereas, higher levels of parents' knowledge of what to do when children were victimized was associated with reports of higher levels of victimization in their children. (4) Lastly, there was a significant direct and negative effect of parents' self-efficacy in knowing what to do (action) when their children were victimized (KBPSES_A) on negative bystander behaviors. Thus, higher levels of parents' knowledge of what to do when children were victimized were associated with less negative bystander behaviors in their children.

Covariates. Parents' gender (mother) was significantly and negatively correlated with victimization behaviors. There was a marginally significant and negative correlation with bullying behaviors.

Table 13. Standardized Estimates and Fit Indices of the effects of parent self-efficacies on parental monitoring and bullying, victimization and bystander behaviors (Study II whole model).

Whole Model	*Estimate*	*S.E*
Direct Effects		
BPSES -> Parent Monitoring	.39*	.08
KBPSES_K ->Bully	-.22*	.10
KBPSES_K -> Victim	-.28**	.08
KBPSES_A -> Victim	.22*	.09
KBPSES_K -> Parent Monitoring	.13	.10
KBPSES_A -> Parent Monitoring	-.00	.09
BPSES -> Defending	-.01	.09
KBPSES_K ->Defending	-.12	.10
KBPSES_A ->Defending	.08	.10
BPSES -> Negative	.10	.07
KBPSES_K -> Negative	.13	.09
KBPSES_A-> Negative	-.17*	.08
BPSES -> Avoidant	.03	.09
KBPSES_K -> Avoidant	.02	.12
KBPSES_A -> Avoidant	-.04	.10
BPSES WITH KBPSES_K	.29**	.06
BPSES WITH KBPSES_A	.26**	.08
KBPSES_K WITH KBPSES_A	.53*	.07
Covariates		
SINGLE ----> Bully	-.04	.09
Victim	.15	.10
Defending		
Negative	-.00	.07
Avoidant	-.02	.09
AA ----> Bully	.14	.09
Victim	-.10	.09
Defending		
Negative	-.03	.05

Avoidant	.05	.10		
MOTHER ----> Bully	-.18	.10		
Victim	-.26*	.08		
Defending				
Negative	.05	.05		
Avoidant	-.10	.09		
	χ^2	RMSEA	CFI	SRMR
	29.55	.07 (.01-.11)	.98	.06

Note: * p-value <.05, ** p-value <.001. BPSES = Parents' general self-efficacy to parent, KBPSES_ K = Parents self-efficacy to know whether their children are being bullied/victimized; KBPSES_A = Parents' self-efficacy to know what to do/how to act when their children are victimized; P_Monitor = Parent Monitoring and Supervision.

Models Predicting Each Outcome

Each child outcome was regressed on parental monitoring and the three parent self-efficacy scales while controlling for all other outcome variables and covariates. With respect to significant findings, the direct path between BPSES and parent monitoring was significant and consistent for all five models. Of the five outcomes, only the model with negative bystander behavior as an outcome had an additional significant pathway. In this model, besides the negative association between parents' efficacy of what to do about victimization (KBPSES_A) and negative bystander behaviors (B = .-18, p = .03) as also seen in Figure 6, there was an additional significant positive association between self-efficacy to know if child is being victimized (KBPSES_K) and negative bystander behaviors (B = .17, p = .02). This was a small effect which suggests that higher competence in being able to know if children are victimized was not associated with reduction in negative bystander behaviors unlike when parents acted on that information. The fit indices and all estimates for the five independent outcomes are reported in Appendix A.

4.5 Summary of Study II Analyses

From the findings of study II, parents' general self-efficacy to parent (BPSES) positively and significantly predicted parent monitoring and supervision activities but parental monitoring and supervision did not significantly predict any of the child outcomes. Secondly, parents' self-efficacy to know about bullying activities of their children (KBPSES_K) was directly associated with a reduction in both bullying and victimization behaviors only but positively associated with negative bystander behaviors. Thirdly, parents' self-efficacy in how to respond to victimization behaviors (KBPSES_A) was directly associated with higher child perceptions of victimization in children as well as fewer assisting/negative bystander behaviors in children. Lastly, there were no significant indirect paths in any of the Study II models. Thus, the indirect pathway proposed by Belsky's model linking parent functioning to development of child outcomes through parenting was also not supported in study II.

CHAPTER 5: DISCUSSION

5.1 Overall Summary of Both Studies

The purpose of this research was to examine the association of parent factors with bullying, victimization and bystander behaviors through the lens of Belsky's (1984) parenting process model. According to Belsky's model, stress and protective factors influence maternal functioning and parenting simultaneously. Parent functioning in turn also predicts parenting which in turn predicts child outcomes. Belsky also acknowledged the role of child characteristics, particularly temperament in the model. Study I used longitudinal data to examine the effect of maternal depressive symptoms and mother-child relationship quality on bullying and victimization behaviors across grades 3, 5 and 6. According to Belsky's model, maternal depressive symptoms and parenting were expected to be influenced by stress and protective factors –marital

relations (maternal intimacy, maternal conflict, and conflict resolution), social support and maternal employment status. Indirect effects of maternal depressive symptoms on bullying and victimization behaviors via parenting were also expected.

Study II added to this research by using cross-sectional data to examine parental self-efficacy, parental monitoring and supervision as new parenting variables. Also bystander behaviors were examined in addition to bullying and victimization behaviors in study II. Taken together, the two studies indicate that there are significant associations between parent functioning, parenting and involvement in bullying (i.e., bullying, victimization and bystander behaviors), however, these associations must be interpreted with caution since the effects were small. Also, contrary to the hypothetical model, no significant indirect effects of parent functioning via parenting were found for bullying, victimization or bystander behaviors.

Stress and Protective Factors. The first domain of Belsky's model predicts effects of stress and protective factors on parent functioning and parenting. There was some support for these effects. In study I increased marital intimacy and social support at grades 3 and 5 predicted a decrease in maternal depressive symptoms, and an increase in mother-child relationship quality both at grades 5 and 6. Secondly, increased marital conflict at grade 5 also predicted increased maternal depressive symptoms at grade 6. These findings support other studies that have examined the role of social support (e.g. Coyne & Downey, 1991; Quittner, Glueckauf & Jackson, 1990), and marital relations such as intimacy (e.g. Kerig, Cowan & Cowan, 1993), and marital conflict (e.g. Bowes et al., 2009; Cummings & Davies, 1994; Smith, Twemlow & Hoover, 1999; Sousa et al., 2010) on parent functioning and parenting.

Beyond the effects of these factors on parent functioning and parenting, Baldry (2003) found that marital conflict had direct significant effects on bullying and victimization behaviors

in children. This hypothesized path was not supported in this study probably because the extent of marital conflict details assessed in Baldry's Italian school study were not asked in the longitudinal study from which this sample was drawn. Secondly, maternal reports of marital conflict were lower than average in this study. The non-significant finding in this study however, may suggest that direct significant associations between marital conflict and bullying and victimization behaviors may occur more in high conflict homes.

Besides marital relations and social support, maternal employment was the third stress and protective factor mentioned by Belsky. Maternal employment was not significant in predicting parent functioning or parenting over time. Mayer (2010) however found negative associations between maternal unemployment and parent-child relationships. There are few studies and mixed results about the role of maternal unemployment status on involvement in bullying in particular. These mixed findings may be due to how employment/unemployment is measured. Whereas some studies use the question of "are you employed?" with a yes/no answer, other studies go beyond the dichotomous categorization to ask both groups how long parents work, are away from home or stay at home with the children (e.g. Christie-Mizell at al., 2011; Magklara et al., 2012). Guided by socio-cognitive theories however, it is expected that unemployment will lead to stress on parent functioning and parenting. Non-significant effects in this study may also be due to the fact that majority of the sample were employed across all three time points.

Parent Functioning. In the second domain of Belsky's model, parent functioning predicts parenting which in turn predicts child outcomes. Study I hypothesized similar directions overtime, however maternal depressive symptoms at grade 3 and 5 did not significantly predict mother-child relationship quality at grades 5 and 6 even though opposite non-hypothesized

paths were significant. Non-significant findings of paths from maternal depressive symptoms to mother-child quality may be due to the fact that study I sample was a low risk sample compared to other samples in studies that found significant negative associations between maternal depressive symptoms and parenting (e.g., Gelfand & Teti, 1990; Goodman & Tully, 2008; Weismann et al., 2006). These studies found stronger associations between maternal depressive symptoms and child outcomes via parenting in clinical samples compared to non-clinical samples. The average report of maternal depressive symptoms in study I was lower than the clinical cutoff score for maternal depressive symptoms using the Center for Epidemiological Study Depression scale (CES-D). Also, CESD questions assessed depressive symptoms in the past week.

Secondly, the indirect effect of maternal depressive symptoms on bullying and victimization behavior hypothesized was not significant; however, maternal depressive symptoms at grade 3 directly predicted victimization behaviors only at grade 5. This hypothesis was based on the findings by Georgiou (2008), who found that maternal depressive symptoms significantly predicted both bullying and victimization compared to children from non-depressed mothers in a Greek sample. Non-significant findings may again be attributed to the different measures used and low prevalence of maternal depressive symptoms reported in the sample.

In addition to findings from study I, in the parent functioning domain of study II, parents' general efficacy regarding parenting and settling limits was positively associated with parental monitoring and supervision of children's' activities but not with any of the five child outcomes (bullying, victimization, defending, negative and avoidant bystander behaviors). However, when specific competencies related to bullying activities were examined, parental knowledge of bullying occurrences had direct negative associations with both bullying and victimization

behaviors and a positive association with negative bystander behaviors. Also, parents' self-efficacy to act on knowledge of child victimization was positively and significantly associated with victimization but negatively associated with negative bystander behaviors. These findings seem to suggest that whereas parents' efficacy to know whether their children were victimized was associated with lower rates of child's perception of engagement in bullying and victimization, children reported increased victimization when parents acted on their knowledge of the ongoing victimization.

Although effects were small, this finding raises interesting questions about what parents do and how they handle reports of victimization since their actions may be causing more harm than good to the victimized child. No published study has looked at these associations yet; however, this finding warrants further investigation since there are two other studies that have found overprotective mothering to be associated with further victimization in children (Georgiou 2008; Stevens et al., 2002). One possibility is that parents may be using ineffective strategies to protect their victimized children, which suggest that parents may need to be empowered to increase their competence to act/respond on knowledge of victimization of their children. It is also possible that the positive association may be driven by parents responding to incidences of victimization. In addition, the sample of children in study II was 4th and 5th graders, which suggests a developmental stage where autonomy is being developed. Thus, besides the role parents need to play to reduce victimization, they may also need education on how to coach their victimized children to effectively handle victimization episodes in order to develop the child's autonomy, independence and assertiveness rather than parent overprotection.

The significant association between efficacy to act and negative bystander behaviors is also enlightening in that, if interventions teach parents and increase their efficacy to effectively

act on reports of victimization, the rates of negative behaviors could significantly drop as well. Despite the hypothesized directions discussed, the direction of effect could be the converse or both ways but cannot be confirmed in this study since a cross-sectional dataset was used for Study II.

Contributions of the Factor Structure of Parental Self-efficacy. This study contributes to parent self-efficacy literature and is the first to look at the role of parent self-efficacy in bullying research. Findings, although small in effect suggest that beyond the effect of parental self-efficacy on parental monitoring and supervision, self-efficacy related specifically to bullying did have direct effects on victimization, bullying and negative bystander behaviors. These findings support studies and the self-efficacy theory that indicates a difference between general self-efficacy versus self-efficacy related to specific areas. Also intervention studies related to parent self-efficacy suggests this parent functioning variable may be a promising area for parent interventions.

Parenting. As the third domain in Belsky's model, parenting was expected to have direct effects on child outcomes, in this case, bullying and victimization behaviors over time. In study I, mother-child relationship quality also showed small effects on engagement in bullying but not victimization. Increased mother-child relationship quality at grade 5 predicted a decrease in bullying behaviors only at grade 6, but not at grade three predicting grade 5. This finding may lend some support in general to other studies that have found similar relationships between some parenting measures and problem behaviors including substance abuse, delinquency (Fletcher, Steinberg & Williams-Wheeler, 2004; Pettit et al., 1999). In study II however, parent monitoring and supervision was not significantly associated with bullying, victimization or by-

stander behaviors. In summary, studies provided limited evidence of direct effects of parenting on bullying, victimization and bystander behaviors.

***Child Outcomes and Child Characteristics*.** Lastly, besides the direct effect of parenting on child outcomes, Belsky's also predicted bidirectional effects of child outcomes on parenting. Thus, Belsky's model suggested that engagement in bullying behaviors and victimization at grades 3 and 5 would predict parenting at grades 5 and 6 respectively. In addition, based on a recent study that found reciprocal effects between maternal depressive symptoms and child internalizing behaviors, it was also hypothesized that above and beyond parenting, bullying and victimization behaviors at grades 3 and 5 would also predict maternal depressive symptoms at later grades. Both hypotheses were supported only for bullying behaviors, where engagement in bullying behaviors at grade 5 predicted reduced mother-child relationship quality at grade 6 as well as increased maternal depressive symptoms at grade 6. Results support literature on the bidirectional effects between parental depressive symptoms and conduct behaviors in children as found by Gross, Shaw & Moilanen, 2008. Thus this finding tends to suggest that child outcomes such as engagement in bullying, like other externalizing behaviors, could also predict and/or worsen maternal functioning, specifically, maternal depressive symptoms.

Belsky (1984) mentioned children's temperament as a key child characteristic that influenced both child outcomes and parenting. Studies have identified anger and fear as traits at are significantly associated with bullying and victimization behaviors respectively. Fear was not associated with the outcomes, thus grade 3 variables were regressed on anger only, which was measured at 54 months. The significant correlations between anger and all the variables except employment status support Belsky's point that child temperament has effects on both

child outcomes and parenting, and beyond that, on all the parent domains studied. Secondly, the significant effect of temperament measured at 54 months on both parent and child variables at grade 3 provide interesting insight into the role of early temperamental traits on later child and parent variables. Temperament may be moderating parenting as other studies report (e.g. Pleuss & Belsky, 2010; Lengua & Kovacks, 2005).

Evaluation of Belsky's (1984) Parenting Process Model. The use of Belsky's model as a heuristic in examining the effects of parent factors on bullying, victimization and bystander behaviors suggests the following: First, there may be direct but weak effects of parent functioning and parenting independently on bullying, victimization and some bystander behaviors. This is however true particularly for the parent factors examined in this study. Secondly, the indirect effect of parent functioning on child outcomes through parenting was not supported for bullying, victimization and bystander behaviors as outcomes. Thus, due to very small effects, results provide tepid support for Belsky's model as a useful parent inclusive model in probing the association of parent factors with bullying, victimization and bystander behaviors.

This is however the first study to examine some parent factors using Belsky's model as a whole, therefore to ascertain the usefulness of this model, more research is required. Secondly, parent factors should be tested at time points earlier than grade 3. Such studies will help indicate which parent factors are relevant when bullying, victimization and bystander behaviors are concerned, and also how important early parent child relationships may be in understanding bullying. Attachment theory for instance, lends insight into the mechanism of caregiver's early responses and parenting as being indicative of cognitive schemas children use to deal with relationships and situations at a later age (Sroufe, 2005; Walden & Beran, 2010). Lastly, examining multiple parent factors and early childhood interactions would clarify the usefulness

of Belsky's model in examining the role of parent factors in bullying, victimization and bystander behaviors. Despite the weak effects, this model is helpful in reminding researchers to consider multiple dimensions of the parent context when examining parent factors related to bullying, victimization and bystander behaviors.

5.2 Limitations of Study and Future Directions

This two-study dissertation has limitations that could be associated with the small effects found in this study. First, the NICHD sample was a low risk sample on the parent functioning and parent practices constructs thus negative effects of these parent factors on bullying and victimization behaviors were limited. Secondly, there were limited measures of parent functioning and parenting variables specifically at grades 3, 5 and 6, thereby limiting the options for examination at these three time points.

Thirdly, the NICHD measures of engagement in bullying behaviors and victimization had four items each, with single items examining physical, verbal and relational bullying and victimization. Future studies should consider using robust multi-item measures that offer the opportunity to examine how parent factors are associated with traditional (physical, verbal, relational) and cyber bullying and victimization behaviors. Also studies should include measures that include items that ask whether children both bully and are victimized will give insight into parent effects on bully-victims. This is important considering the increasing evidence of long term negative impact on children with bully-victim behaviors later in young adulthood compared to victimized peers (Arseneault et al., 2006; Copeland et al, 2013).

As a fourth point, future studies should include multiple reporters of parent and child measures. For example, both maternal and child reports on marital conflict instead of only ma-

ternal reports may strengthen effects of findings. Likewise, parent, teacher and/peer reports of bullying, victimization and bystander behaviors instead of child reports only would bolster findings. Notably, there are fewer studies that have parents and teacher reports because they are least likely to observe or acknowledge these behaviors compared to peers however, proxy measures such as parent and teacher reports on aggression, deviance and changes in academic achievement may be measures that provide substantive correlations with self-reported bullying and victimization (e.g. Arsenault et al., 2006; Espelage & Holt, 2007).

With respect to study I design, although the crossed lagged design allows for stronger conclusions of the directions of effect and examines changes in effects overtime, the downside to this design is the possibility of over control of variables which could also account for the small effects found in this study. It is also possible that change over time is not being operationalized correctly. For instance examining correlated slopes or using other analytic designs may be other options for study.

As limitations and future recommendations for study II, the cross sectional nature of the dataset limits predictive conclusions. Also, although parental efficacy was found to be associated with children's behavior these effects could be directional in nature, where the behavior of children influences parents' efficacy in general and specific parenting tasks (Jones & Prinz, 2005). Future studies should consider assessing the two new efficacy factors related to bullying and victimization using longitudinal datasets.

Also, future studies should consider increasing the number of items for the two new self-efficacy factors (parent knowledge and parent response to victimization). These factors are promising constructs in understanding what aspects of parental self-efficacy interact with child

bullying behaviors. These factors were originally adapted from a child self-efficacy measure related to bullying (Kim et al., 2010) and thus needs validation to distinguish between the two factors.

Related to both studies, both studies examined parent factors related to bullying, victimization and bystander behaviors of children within grades 3 to 6. Researchers should also examine the three dimensions of parent factors at younger ages of children to see if there are differences in strength of parent effects. First, considering that generally, the impact of parents' influence on children's behaviors reduces as they grow and peer influences increase, it is also possible that the effects of parent factors on these child outcomes begin early, and these effects may be stronger than effects at 3rd grade. In other words, the foundation is set early for future bullying and related behaviors among peers. There is evidence of parent functioning such as low maternal empathy being positively related to bullying behaviors in preschoolers (e.g. Curtner-Smith et al., 2006). Therefore, a look at early parent functioning and parenting may help us understand the process, and changes in strength of effects of parent factors over time on these child outcomes. There is evidence of early parent functioning and parenting being associated with antisocial and conduct behaviors (Forgatch et al., 2009; Lansford et al., 2011) thus this idea is worth exploring for bullying and related behaviors too.

Such studies would also give insight into the role of attachment and early childhood interactions and their impact on involvement in bullying. Attachment theory suggests that children who experience poor parent-child emotional bonds and inconsistency in response to child relational needs develop similar cognitive schemas for relating with others (Main, Kaplan & Cassidy, 2005; Walden & Beran, 2010). Insecure children are therefore more likely to be fearful or reactive in response to interactions. Social cognitive theories can also be used to explain

what may be going on in early childhood. Through modeling, children are likely to react or respond to conflict and other situations where they end up bullying or being victimized. For instance, studies in neglect and family violence such as Baldry's (2003) study showed that elementary school children who observed parental physical abuse were more likely to bully and/or be victims of bullying in school. Also where children observed verbal parental violence, both boys and girls were more like to relationally bully in school compared to kids who had not observed parental verbal violence. Bandura's (1977) explanation of modeling role models may give insights into why some children are victims and other are bullies in situations of observed family violence. Thus children exhibiting bullying behaviors and victimization may be modeling similar behaviors of their model parent with peers when there is a negative trigger.

Results raise questions about the mechanisms through which maternal depressive symptoms are associated with bullying behaviors. Whereas the effects of maternal depressive symptoms on victimization behaviors may be through maternal non-responsiveness (Downey & Coyne, 1990; Goodman & Tully, 2008) the mechanism for bullying behaviors is not yet clear. In this study like others (e.g. Georgiou, 2008), maternal depressive symptoms did not predict bullying behaviors however, from this study, bullying behaviors predicted increased maternal depressive symptoms. Considering that maternal depressive symptoms have been associated with both internalizing and externalizing behaviors in children (Goodman, Connell & Hall, 2011), and reciprocal effects exist in parent-child dyads, this significant effect may be through negative perceptions and subsequent disabling thoughts and emotions parents have about their inability to reduce or control their children's bullying behavior (Goodman & Tully, 2008; Gross, Shaw & Moilanen, 2008; Gross et al., 2009). For mothers with mental health related conditions and other risk factors, these perceptions and negative emotions may exacerbate

their condition (Goodman & Tully, 2008), in this case increase increasing maternal reports of depressive symptoms. With such possible mechanisms and the already established links between maternal depressive symptoms, externalizing behaviors and early onset psychopathology, the associations between bullying, later child antisocial behaviors, child onset psychopathology and maternal depressive symptoms are important associations to study for early child and parent prognosis, and for effective interventions.

If there are strong associations between early parent factors on early signs of bully related behaviors, then early interventions in positive parenting and the like may be the future direction of bullying and victimization interventions, in order to curb future bullying problems and their negative impact. Parent interventions such as the Oregon model of parent management training (PMTO, Forgatch & Patterson, 2010) have effectively reduced antisocial behaviors in children whose parents were trained on positive parenting strategies (e.g. Degarmo & Forgatch, 2005; Forgatch et al., 2009). The training model has also been used to improve parent stress factors such as marital conflict (Bullard et al., 2010). An intervention program that tailors such parent training models to early bullying behaviors may be useful.

Lastly, besides the fact that there are currently no clear guiding frameworks for design, research, and intervention studies related to bullying, victimization and bystander behaviors, theoretically based frameworks don't currently exist that includes the parent context. For this reason, Belsky's parenting process model was tested as a heuristic model. From this study, the model as a whole provided small associations between the parent factors examined and the child outcomes, thus further studies with other parent factors are needed to determine if the model as a whole is inadequate or rather it depends on which parent factors are studied.

The model however provides an informative framework when thinking about factors that influence parents and parenting.

5.3 Study Implications

Findings from the two–study research revealed small effects of the role of parent factors on bullying, victimization and bystander behaviors support had small effects. Despite these small significant effects, these studies provide empirical information to support the idea that parent functioning may be more robustly associated with bullying, victimization and bystander behaviors than parenting predictors. This assertion however requires further empirical examination. There however are existing parent interventions related to parental functioning variables such as those examined in this study. For developmental psychologists and researchers in prevention/intervention studies who do not have clinical training, they may not consider intervening to reduce maternal depressive symptoms as the first or best strategy since such interventions may require more clinical expertise. Other parent factors such as parental self-efficacy may however be easier to implement, as well as provide for many parents at a time.

Parent self-efficacy intervention methods have been found to increase efficacy in parenting and mother-child interactions (Morawska & Sanders, 2006; Sofronoff & Farbotko, 2002). These interventions are based on social cognitive theoretical principles and focus on teaching and coaching parents on using effective parenting strategies with their children (e.g. Behavioral Family Intervention or Triple P program; Sanders et al., 2000; and Parent Management Training; PMT, Kadzin, 1997). Based on the basic tenets of these interventions, the Oregon model of the parent management training (PMTO), a well-known parenting model can simultaneously be used to both teach effective parenting and enhance parent's self-efficacy.

More specifically, when parent-self efficacy interventions are applied to bullying and victimization behaviors, as found in study II, interventions should aim at goals which at least includes: (1) educating parents to be aware of how their personal functioning may subtly but directly affect their children's behaviors including engagement in bullying, being victimized and being bystanders. It would be important to include that these behaviors can have detrimental effects on children in the short and long term, especially for victims. (2) Teaching and coaching parents to be able to identify ongoing victimization in their children and effectively handle the situation. In addition, study II suggests that parents' competence in effectively handling reports of victimization may also reduce negative bystander behaviors, again suggesting that increasing parental self-efficacy may be a viable parent variable that may have positive effects on bystander behaviors as well. One way negative bystander behaviors may be reduced would be through parents' increased self-efficacy in understanding the bully phenomenon and through their interactions with their children. During these interactions, parents will impart their expectations of positive bystander behaviors to their children.

Lastly, existing literature have established cyclical relationships between maternal depressive symptoms and self-efficacy where parental self-efficacy have been considered as mediators and moderators of the relationship between maternal depressive symptoms and child outcomes (Coleman & Karraker, 2003; Jones & Prinz, 2005). Therefore increasing parents' self-efficacy may not only directly affect bullying, victimization and bystander behaviors but may also reduce maternal depressive symptoms, which in turn provides opportunities for parents to increasingly engage with their children, look out for symptoms of victimization and effectively help reduce victimization and negative bystander behaviors.

In conclusion, despite the small effects and the limitations of these studies, this research pioneers the examination of the parent context as recommended by various researchers with respect to bullying and victimization behaviors. This study went a step further to examine the role of parent factors with bystander behaviors, a newer area of bully related research. Belsky's parent process model as an investigative framework gave weak associations, strengthening the need for further research to examine both the model and other parent factors. Maternal depressive symptoms and parental self–efficacy are recommended as possible effective parent functioning variables for future interventions, especially parent –self efficacy which will be a relatively easier intervention to aim for as well as provide for large cohorts of parents at a time compared to treating depressive symptoms. These parent interventions should be considered in tandem with ongoing child interventions.

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Appendix A.

Standardized Estimates and Fit indices of Individual Models Controlling for all other Outcomes.

Models		*B*	*S.E*	χ^2 (df)	RMSEA (CI)	CFI	SRMR
Victimization only							
	BPSES -> P_Monitor	.38**	.08	5.62* (1)	.18 *(.06- .34)*	.97	.02
	KBPSES_K -> P_Monitor	.17	.10				
	KBPSES_A -> P_Monitor	-.05	.09				
	BPSES -> Victim	-.03	.07				
	KBPSES_K -> Victim	-.15*	.07				
	KBPSES_A -> Victim	.17*	.07				
	BPSES WITH KBPSES_K	.19**	.06				
	BPSES WITH KBPSES_A	.26**	.08				
	KBPSES_K WITH KBPSES_K	.51**	.07				
Covariates							
MOTHER -->	BPSES	-.07	.08				
	KBPSES_K	-.06	.10				
	KBPSES_A	-.08	.08				
	P_Monitor	.03	.08				
SINGLE -->	BPSES	.11	.09				
	KBPSES_K	-.11	.10				
	KBPSES_A	.04	.10				
	P_Monitor	-.05	.08				
AA -->	BPSES	.26	.08				
	KBPSES_K	.19*	.09				
	KBPSES_A	.22*	.09				
	P_Monitor	.04	.08				

	Bully	.50**	.08				
	Defending	.11	.08				
	Negative	-.15	.10				
	Avoidant	.06	.09				
	P_Monitor	-.02	.07				
Bully Only	BPSES -> P_Monitor -	.39**	.08	5.89* (1)	.19 *(.07 -.34)*	.97	.02
	KBPSES_K -> P_Monitor	.16	.11				
	KBPSES_A -> P_Monitor	-.05	.09				
	BPSES -> Bully	.04	.06				
	KBPSES_K -> Bully	-.10	.08				
	KBPSES_A -> Bully	-.01	.08				
	BPSES WITH KBPSES_K	.18**	.06				
	BPSES WITH KBPSES_A	.26**	.08				
	KBPSES_K WITH KBPSES_A	.53**	.06				
Covariates							
	MOTHER --> BPSES	-.09	.08				
	KBPSES_K	-.08	.09				
	KBPSES_A	-.06	.09				
	P_Monitor	.03	.09				
	SINGLE --> BPSES	.11	.09				
	KBPSES_K	-.09	.09				
	KBPSES_A	.02	.10				
	P_Monitor	-.06	.08				
	AA --> BPSES	.26**	.08				
	KBPSES_K	.16	.09				
	KBPSES_A	.22*	.10				
	P_Monitor	.05	.08				
	Victim	.51**	.07				

	Defending	-.01	.08				
	Negative	.07	.09				
	Avoidant	.23**	.09				
	P_Monitor	.10	.07				
Defending Only	BPSES -> P_Monitor	.37**	.08	6.87** (1)	.20 *(.08-.36)*	.99	.03
	KBPSES_K -> P_Monitor	.15	.10				
	KBPSES_A -> P_Monitor	-.01	.09				
	BPSES -> Defending	.03	.02				
	KBPSES_K -> Defending	-.01	.02				
	KBPSES_A-> Defending	.03	.02				
	BPSES WITH KBPSES_K	.19**	.06				
	BPSES WITH KBPSES_A	.26**	.08				
	KBPSES_K WITH KBPSES_A	.51	.07				
Covariates							
	MOTHER ----> BPSES	-.08	.08				
	KBPSES_K	-.07	.10				
	KBPSES_A	-.07	.09				
	P_Monitor						
	SINGLE --> BPSES	.12	.09				
	KBPSES_K	-.10	.10				
	KBPSES_A	.01	.10				
	P_Monitor	-.04	.08				
	AA --> BPSES	.25**	.09				
	KBPSES_K	.17	.09				
	KBPSES_A	.24*	.10				
	P_Monitor	.04	.08				
	Bully	-.02	.87				

	Victim	.18	.09				
	Negative	-.02	.87				
	Avoidant	-.14	.11				
	P_Monitor	.13	.16				
Avoidant Only	BPSES -> P_Monitor	.37**	.08	6.12* (1)	.19 *(.07-.35)*	.95	.03
	KBPSES_K -> P_Monitor	.17	.10				
	KBPSES_A -> P_Monitor	-.04	.09				
	BPSES -> Avoidant	-.03	.08				
	KBPSES_K -> Avoidant	-.04	.10				
	KBPSES_A -> Avoidant	.06	.08				
	BPSES WITH KBPSES_K	.18**	.06				
	BPSES WITH KBPSES_A	.26**	.08				
	KBPSES_K WITH KBPSES_A	.52**	.07				
Covariates							
	MOTHER --> BPSES	-.09	.08				
	KBPSES_K	-.08	.09				
	BPSES_A	-.07	.09				
	P_Monitor	-.07	.09				
	SINGLE --> BPSES	.12	.09				
	KBPSES_K	-.10	.10				
	KBPSES_A	.02	.10				
	P_Monitor	.02	.10				
	AA --> BPSES	.24**	.09				
	KBPSES_K	.18*	.09				
	KBPSES_A	.24*	.10				
	P_Monitor	03	.08				
	Bully	.26*	.11				
	Victim	-.19*	.02				
	Defending	-.11	.07				

	Negative	.45**	.16				
	P_Monitor	.05	.08				
Negative Only	BPSES -> P_Monitor	.38**	.08	6.53* (1)	.20 *(.08 -.35)*	.99	.03
	KBPSES_K -> P_Monitor	.15	.10				
	KBPSES_A -> P_Monitor	-.02	.09				
	BPSES -> Negative	.08	.07				
	KBPSES_K -> Negative	.17*	.07				
	KBPSES_A -> Negative	-.18*	.08				
	BPSES WITH KBPSES_K	.19**	.06				
	BPSES WITH KBPSES_A	.26**	.08				
	KBPSES_K WITH KBPSES_A	.51**	.07				
Covariates							
	MOTHER --> BPSES	-.08	.08				
	KBPSES_K	-.07	.10				
	KBPSES_A	-.07	.09				
	P_Monitor	.01	.08				
	SINGLE --> BPSES	.12	.09				
	KBPSES_K	-.10	.10				
	KBPSES_A	.02	.10				
	P_Monitor	-.04	.03				
	AA --> BPSES	.25**	.09				
	KBPSES_K	.17*	.09				
	KBPSES_A	.24*	.10				
	P_Monitor	.04	.08				
	Bully	.08	.10				
	Victim	.09	.07				
	Defending	.14	.09				
	P_Monitor	-.13	.08				

Note: * p-value <.05, ** p-value <.001. BPSES = Parents' general self-efficacy to parent, KBPSES_ K = Parents self-efficacy to know whether their children are being bullied/victimized; KBPSES_A = Parents' self-efficacy to know what to do/how to act when their children are victimized; P_Monitor = Parent Monitoring and Supervision.

APPENDIX B

List of Child Survey Questionnaires Used in Bully Project

1. Student Comprehensive Assessment of Bullying Behavior (bullying, victimization, bystander behavior, and school safety) (Varjas, Hernrich & Meyers, 2009)
2. Efficacy for Coping with Bullying Scale (Kim, et al., 2010)
3. Moral Disengagement Scale (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996)
4. ClassMaps (classroom climate) (Doll, et al., 2010)
5. Satisfaction With Life Scale (Gadermann, Schonert-Reichl, & Zumbo, 2010)
6. School Connectedness Scale (from adapted version of the Georgia Student Health
7. Empathy for Victims Scale (Batson, O'Quin, Fultz, Vanderplas, & Isen, 1983; Coke et al., 1978; Toi & Batson, 1982; Batson, Bolen, Cross, & Neuringer-Benefiel, 1986; Eisenberg & Miller, 1987)
8. The Aggression Scale (Orpinas & Frankowski, 2001)
9. Center for Epidemiological Studies Depression Scale for Children (CES-DC)

APPENDIX C

Fifth Avenue Elementary & Renfroe Middle School Needs Assessment: Fall, 2012

Section A: Please tell us how much you know about the following. Check one response box for each question.

		1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
1.	My child is safe at school					
2.	There is adequate supervision sure school					
3.	Students show respect					
4.	Teachers show respect for the students					

		1 Yes	2 No	3 I Don't Know
5.	**Has your child had any of the following things happen to him/her during the past school year?**			
	a. Has been picked on by other students either at school or on the way to or from school.			
	b. Has been physically attacked or involved in fights at school or on the way to or from school.			
	c. Has been teased or called names at school.			

		1 Almost Never	2 Not very often	3 Some of the time	4 Almost Always
6.	Do you know what your child does during his/her free time?				
7.	Do you know where your child goes when he or she is out with friends?				

8.	Does your child talk about how he or she is doing in the different subjects in school?				
9.	Do you ask your child about things that happened during a normal day at school?				
10.	Does your child tell you about school [e.g. how (s) he did on exams, relationships with teachers and students, etc] when (s) he gets home?				
11.	Do you normally know where your child goes and what he or she does after school?				
12.	In the last month, how often has your child talked to you about his or her friends?				

Section B: Please check the appropriate box, the extent to which you agree or disagree with these statements.								
		1 Definitely Disagree	**2**	**3**	**4 Neutral**	**5**	**6**	**7 Definitely Agree**
1.	If my child were teased by other kids at school, I would want my child to defend him /herself even if it meant hitting another child.							
2.	When my child does something wrong, talking about it with him/her helps more than spanking.							
3.	If my child gets into a fight with another child, I won't try to stop it because my child has to show that she/he can defend herself/himself.							
4.	Sometimes a physical fight might help my child have a better relationship with other children.							
5.	If I found out my child hit another child, I would be very disappointed, no matter what the reason.							

		1 Not Sure	2	3 Some what Sure	4	5 Real-ly Sure
13.	**How sure are you that you…..**					
	a. Know the difference between bullying and teasing?					
	b. Know if your child is being bullied in school?					
	c. Know if your child is being bullied online?					
	d. Know what to do when someone bullies your child in school?					
	e. Know what to do when someone bullies your child online?					

Section C: Please indicate your opinion (check) for each question										
		1 Nothing	2	3 Very Little	4	5 Some Influence	6	7 Quite a Bit	8	9 A Great Deal
1.	How much can you do to help your child enjoy school?									
2.	How much can you do to discourage your child from skipping school?									
3.	How much can you do to get your child to stay out of trouble in school?									
4.	How much can you do to keep track of what your child does when outside the home?									

5.	How much can you do to get your child to associate with friends who are good for him /her?									
6.	How much can you do to instill your values in your child?									
7.	How much can you do to keep your child from going to dangerous areas and playgrounds?									

Section D: Please circle the basic information that describes you.					
Parent Responding to this survey:	Father	Mother	Guardian	Other	
Marital Status:	Single, Never Married	Single, Divorced/ separated	Single, widowed	Married or living with partner	
Age:					
Race /Ethnicity	Caucasian	African American	Latino/Hispanic	Asian	Other

THANK YOU!!!